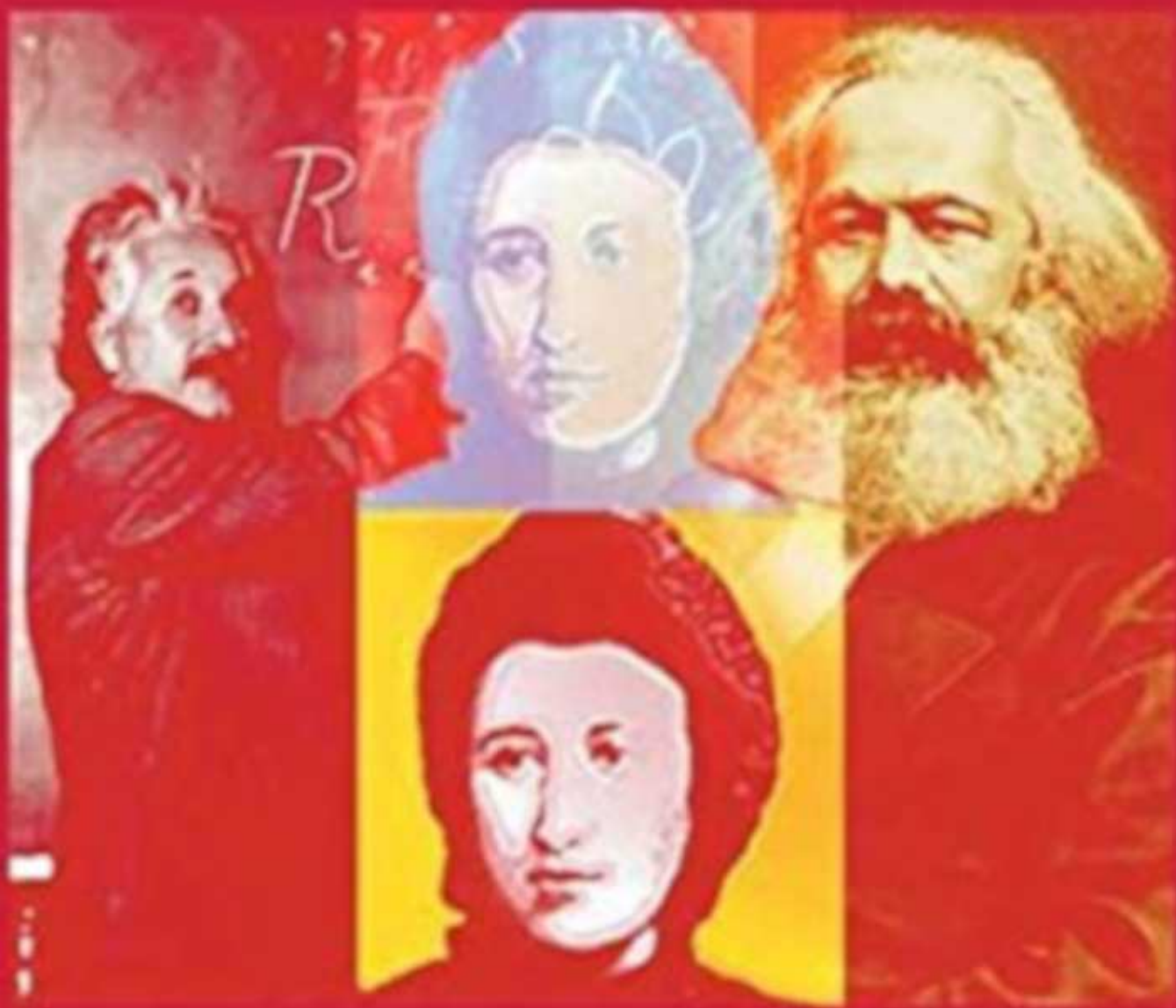


21st Century Socialism

Translated by Paul Cockshott



Heinz Dieterich

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Thanks dear Paul,

that must have been a lot of work. I really appreciate it and certainly, with your command of the topic and the language, it is an excellent translation.

Thank you again and will meet at our new Congress.

Best wishes,

Heinz

21st Century Socialism

Heinz Dieterich Steffan

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Acknowledgements

This book is the culmination of a thirteen year-long process of investigation into the world system; its point of departure it was the formation of the Forum for the Emancipation and Identity of Latin America, in 1988. This forum opposed the cynical festivities of the 5th Centennial of the "Discovery of America" that the Spanish elite, headed by Felipe González government (PSOE), had organized conjointly with the sectors Creole neocolonialists. As the verbiage reached its climax, in 1992, it was already becoming clear that the invasion of the western hemisphere in 1492 had been the first neoliberal globalization by a nascent European superpower. After 12th October of 1992, the wave of the contemporary neoliberalism could be presented as an organic continuation organic of 500 years of exploitation by the Atlantic bourgeoisies.

The collapse of "actually existing" socialism made c the logic of this process even clearer, making evident that the so called "cold war" was just an episode in the long "north-south" war, that is to say, it left the enduring problem of colonialism and western imperialism, a problem that was as unresolved by the USSR as slavery was by Spartacus's tragic uprising.

When West regained control of the world system, intellectuals as a class were paralyzed. Different bourgeois ideologies had penetrated deep into their general culture, causing a general productive sterility. It became once again necessary, to launch popular struggles to break ideological stagnation and to rescue to critical theory. In that recovery of critical thought the present work acknowledges that one of its systematic antecedents was the interdisciplinary book *End of the global capitalism: The New Historical Project* that I organized at the end of the '90s.

The book gathered contributions by committed intellectuals that allowed the contours of post capitalist civilization to be scientifically delineated. Amongst them the economist and historian Arno Peters, of the German Federal Republic, professor emeritus it deserves special mention, a veritable Renaissance genius he discovered the economic principle of the new socialist society, upon which hang all serious proposals for a non-capitalist system. Carsten Stahmer, head of the Division of Analysis Input-Output, of the Office of Statistics of the German Federal Government, and professor of statistics of the University of Heidelberg, who contributed important mathematical knowledge about the feasibility of an economic system based on objective value theory.

The philosopher Enrique Dussel, born in Argentina and for many years regular professor of the Metropolitan Autonomous university in Mexico, has moved beyond the abstract axiomatic ethics, developing an ethics of life (material) that is of great practical value for emancipatory struggles of this century. Nildo Ouriques, professor of political economy of the University Federal of Santa Catarina, Brazil, member of the Socialist Forces tendency of the Workers Party (PT), contributed

valuable political elements to the New Historical Project. Pedro Sotolongo, researcher of the Institute of Philosophy, of Cuba, cooperated in discussions on the experiences of the Cuban Revolution; the Chilean philosopher and ex Socialist Party militant, Hugo Zemelman who works in The School of Mexico, has helped with his reflections on the philosophy of the subject. Finally, Raimundo Franco, ex director of the Institute of Cybernetics, Mathematics and Physics (ICIMAF) Cuba, it has been a first rate collaborator in this work. Not to mention the discussions we had on dialectics, advanced physics, mathematics and their implications for revolutionary theory, without which this work would not have been possible.

Many other friends and partners from the Patria Grande have accompanied me during those long years on the road toward New Socialism: among them Enrique Gaucher, Alma Rosa Vine, Reynaldo Acebedo, Carlos, Miguel and Stella Calloni who shared wines, barbecued steaks and debates with me, in that beautiful place on the humid pampas that is Buenos Aires. At the other extreme of Nuestra America, where the bearded cayman walks, my faithful friends were always Pedro Martínez, Caesar Fields, Gastón González, Jorge Risquet, Pedro Ross, Manuel Limonta and Julián Álvarez. Recently Juan of Castro and Bibiana recently immigrated from Spain, contributing an enormous flow of economic knowledge and ethics to the Movement for participative Democracy. I must also mention my sister Hilde whose small German bookstore granted the emergency loans that were sometimes necessary to overcome financial crises. My special thanks also to my partner Sandra Mirna whose didactic questioning about this rebel thesis forced me to think in a language accessible to the lay reader.

To all those that I have not mentioned, but that in one way or another contributed to this book, my most fraternal thanks. Heinz Dieterich Steffan

Introduction

The first phase in the history of modern society draws to a close. For more than two hundred years, from the French Revolution (1789) until now, mankind had two great evolutionary roads at its disposal: capitalism and historical socialism (actually existing). Neither has been able to solve the urgent problems of the humanity, among them: poverty, hunger, exploitation, economic sexual and racial oppression; the destruction of nature and the absence of real participatory democracy. What characterizes our time is, therefore, the exhaustion of the social projects of the bourgeoisie and of the historical proletariat, and the opening of the global society toward a new civilization: Participative Democracy.

When the bourgeoisie established its historical project - which allowed it to function for two centuries as the hegemon of global society - it built it on four theoretical and practical foundations: the national market economy, based on exchange value; formal or plutocratic democracy; the class state and the free citizen. The labour parties, in their more radical variant, also configured their historical project around four constituent elements: the non-commodity economy, based on use value; a real participative democracy; the democratic State; the rational, ethical and autonomous human subject. At the beginning of the XX century, the socialdemocrat movement adhered to the project of the bourgeoisie.

In practice, the societies built by the respective protagonists showed, as many similarities as differences; because their driving forces were subjected to very similar objective conditions of development: capital accumulation, large scale industrial production (Fordism), the market economy and the vertical state.

Now, the arena of history upon which both social actors once faced one another, each with their respective battle plans and troops, is once again clear, giving us a glimpse of looming future events. Nobody who understands this first stage of modern society believes that capitalism can be the system of the future. One that gives humanity the ideals it seeks: peace, real democracy and social justice. And nobody realistic, would dare to think that what was once called "actually existing" socialism is still able to constitute a real alternative, one able to overcome to capitalism by means a mass movement.

Clear the main characters of the past from the stage!

History has given the green light to the second stage of the modernity, one that revolves around solving tasks the previous main actors could not solve: the construction of the four constituent institutions of a new civilization that stem not from philanthropic speculation, but from the lessons of social practice these last two centuries, from the new results of advanced science and finally from the development of productive technology.

To publish this book with the title *The Socialism of the XXI Century*, not much more than a decade of the fall of the Berlin wall, is not, therefore, a utopian or nostalgic act.

There is no frivolity, no utopianism nor failures of historical memory in it.

The actual tempo of social evolution social announced its appearance. The most powerful indicator of the structural exhaustion of bourgeois civilization is the reality created in its image, one in which the human existence more and more lacks a sense of life.

Oppressed by the existential and daily anguish of their own precarious survival, without spiritual transcendence beyond trivial consumerism, the alienated subject cannot remedy their situation inside bourgeois society, but only in an qualitatively different form of existence, Participative Democracy.

The qualitative jumps in the humanity's evolution are given by the historic projects that great social subjects develop and implement. The fight between these has, through history, been a confrontation between visions of possible futures proposed by the main classes in society. A class or social subject that has no systematized vision of the future - their own historical project - will not own the future, but instead become the winners' servant. We hope this small effort will bring theory to the grass roots and enable theoreticians to link up with the grass roots, to constitute the new historical subject of human emancipation.

CHAPTER 1

End of bourgeois civilization

1.1. Science and the new socialism

Our judgement about the end of the bourgeois society is not based on the author's subjective appreciations, but on knowledge about what science and ethics (critical science) tell us about what the human condition could be today and what it actually is. Viewed through the "eyes of the reason" (theory), the mystifications of the bourgeoisie are ineffectual; they clearly disclose its historical trajectory: from its genesis in the primitive accumulation of capital and power in the XVII and XVIII centuries, its "adolescence" in the XIX century, maturity in the XX century, until their classic phase which began after the Second World War. This last phase, in which they reach their prototypical form, marks, at the same time, their decline toward the postcapitalist civilization. To understand this judgement by critical science, we have to ponder a moment in the reasons on which it is based. Science has let us understand the mysteries from the universe, giving us explanations on the *why* of the things. From these explanations we know that human beings use different symbolic systems, to interpret the reality and to orientate themselves with respect to reality, for example common sense, magical thought, aesthetic and artistic thought, philosophical one and the religious ideas, amongst others. Each one of these systems fulfills specific functions for the human survival, but the only science has the capacity to provide us with an objective knowledge of phenomena and, in this way, to make us understand how they *are* in fact. For example, if a person it detects a discolouration on their skin and they want to know if it is a melanoma (cancer), only science (medicine) can give them the answer. With this answer, they may find a cure or method for it to be treated. And what applies to the health of a person applies to the "pathology" of a society: only science allows us to thoroughly understand it and to develop, on this diagnosis, programs of viable change. Let us make use, therefore, of what the philosopher Hegel called "the eyes of the reason", what appears in Marx and Engels as the "philosophy of the practice" and that us we call, simply, science or ethical science.

The advance of the modern sciences has provided growing objective knowledge about the laws that determine the behavior of all that exists (the universe), including human society and individuals. Of those areas of knowledge there are five relevant to this work:

- (1) The universe only has two ways of existing: as substance (matter) and as energy. This property or characteristic means that all phenomena, from a stone through to human thought, are matter and/or energy and can, ultimately, to be explained as such.

- (2) All that exists is in incessant movement, that is to say, in constant evolution change, as we observe in atoms, cells, organisms, human organizations and the cosmos, among other phenomena. Apart from matter and energy, all that we observe in the nature and in the society, it is, consequently, passing or transitory. The issue is not therefore if bourgeois society and the national market economy are transitory phenomena or permanent, but simply:
 - (a) Which are their characteristic frequencies or rates of change,
 - (b) What type of civilization will replace them
- (3) To suppose that the bourgeois institutions are not fleeting, but that they represent the end of the human evolution (Fukuyama) means falling into the absurdity of affirming that the bourgeois society is exempt of the ontologic laws of the universe. It is because of this characteristic of all that exists, that Marx says that communism as such it is not the end point of human evolution (Ziel der menschlichen Entwicklung), but only the "necessary image" of its near future (after capitalism).
- (4) The movements or behaviors of the reality can be described with concepts of the mathematics. Using such concepts can describe the evolution with five different dynamics :
 - (a) linear,
 - (b) non-linear,
 - (c) probabilistic
 - (d) chaotic (unforeseeable)
 - (e) some combination of the above.

Human social relationships are, in general, developed as a combination of those four behavioral dynamics or evolution. It is case (d) that explains what Marx and Engels understood and analyzed as dialectical processes and qualitative jumps in the evolution of the society or, in the political plane, as the dialectic of reformation and revolution.

Due to characteristic (d) of the universe, certain movement processes (evolution) of nature and of society can - in certain phases of their development or under certain circumstances - change the quality of their behavior or "state", that is to say, to assume a different behavior or state, as when the water freezes and goes from a liquid to a solid, or when it warms and it becomes a gas. In traditional philosophy this behavior change was expressed by means of the concept "qualitative jumps"; in the social sciences and political it used to be qualified as "revolution" and, in the modern physics it is expressed in ideas like quantum jump, phase change or change of system state. The implications of this discovery of modern science are fundamental for the whole post capitalist historic project because they mean:

- (a) That state change is a law like regularity of the universe and not just of human social systems, just as it had previously been assumed in the concept and theory of "revolution";
- (b) that the revolutionary processes or qualitative jumps are not necessarily irreversible, just as it is observed in certain natural processes (water→steam→water);

- (c) that, knowing the conditions of behavior of the system, that is to say, their "normal" evolution, the circumstances that will cause a qualitative jump in their behavior can, with a certain probability, be foreseen ;
- (d) that change of system state (revolution) can have different degrees of "rupture" and, therefore, different degrees of continuity. An natural example of this phenomenon it is the conversion of water in vapor that from the point of view of the physics it is considered as a qualitative jump of the system (of a liquid to a gas), but not from the point of view of the chemistry.

One of many social examples of this phenomenon was the revolution that brought independence to Latin America. The qualitative jump only operated in the political subsystem of postcolonial Latin American society, replacing the Spanish elite by a Creole one within the ruling class, but there was no qualitative change to the economic or cultural system. That's to say, the degree of rupture was outweighed by the forces continuity, what explains both the stagnation of the transformation and also the persistence of neocolonialism in "Nuestra America".

- (5) The universe is organized in systems, which join or network. This property means that nothing actually exists that is not part of a bigger system. There are no isolated elements in the natural or social universe. A person belongs to a family, to a work-place, to a national society that, in turn, it is a regional subsystem of the global economy, etc.. This systemic character of the universe is fundamental to understanding it and has to be appropriately reflected in theory, just as it was in the works of great thinkers like Hegel ("The everything is the true thing"), Marx, Engels and Lenin. The movement of the moon, for example, cannot be rationally explained outside its context in the solar system; the evolution of a bacteria is inexplicable outside the context of the environment within which it reproduces and human behavior without a social context is unimaginable.
- (6) Lastly, all components of the universe, have a distinct identity. An atomic isotope, for example, is defined in its particularity by mass, nuclear electric charge and spin, among other quanta. A biological system, as a dog, a plant or a human being, has a genome (configuration of genes) that is unique in the universe; but, the human being has, besides their individual physical and biological properties, a cultural identity (software) that gives them a particularity or unmistakable identity in front of all other human beings. It is that human identity - historically analyzed in political philosophy as the consciousness of the subject - that is a basic pillar of all human practice and all historical projects.

Annotation by Paul

point 6 above is slightly confused. It is not entirely clear that every component of the universe has a distinct identity in quite the way described. One of the key points of quantum theory is that, properly considered, a collection of particles has to be treated as having a single complex valued state vector. If we have n components, each of which has m possible quantum states,

the system as a whole has to be described by a vector of complex numbers with m^n components. In this sense the 'identity' of the elements is an illusion. There is another problem with the fact that atoms are mass produced with identical characteristics (Kelvin even adduced from this mass produced character divine interventions!). As it stands I have corrected the description above substituting the phrase atomic isotope for atom, and nuclear electric charge for electric charge.

We can differentiate three types of systems in the universe, according to the organizational level or complexity of the matter that forms them: the pre-biotic, with merely physical properties or physical and chemical ones, for example, a stone; the biological systems, like a plant, bacterium or an animal that, besides the physico-chemical properties has the property of life, and human social systems, like a person, a family, a company or a State that have a fourth property that it is the individual or collective capacity to reason. The latter systems can be termed propositional, because the human mind has the capacity to rationally plan the future of the subsystem.

The subject's freedom to change a certain system, it is determined by four factors:

- (1) the degree of structural stability versus instability in the system at the moment of the planned change;
- (2) the direction of its evolution;
- (3) the dynamics (speed) of its evolution;
- (4) the phase of its life cycle at the moment of change.

All systems have a life cycle that depends on two factors:

- (1) of the complexity of organization of the matter that makes up the entity,
- (2) its relationship with the environment.

This explains, why pre-biotic, biological and human social system have such different life cycles. A stone can exist hundred of thousands of years, a long lived animal like a Galapagos Tortoise survives around 180 years and a human society (such as China), for some thousands of years.

One must determine at what phase in its life cycle a system exists, if you want to change it. In the case of purely physical systems, the organization of the matter that makes it up, and the environment. In the case of a stone, if it is made:

- (1) of sandstone, granite, marble, etc. and,
- (2) if it is exposed to fluvial, solar, aeolian or glacial action etc.

In biological systems, the life cycle depends on:

- (1) the genetic configuration (genome) and existence parameters (e.g. age) of the system, for example, a plant, together with,
- (2) the favorable or unfavorable nature of their environment.

The life cycle of human social institutions has to be defined somewhat differently, since they don't come to an end due to material decay or genetic errors, they end instead:

- (1) in the case of subsystems, due to the exhaustion of their ability to contribute to the maintenance of the higher level system superior to which they belong;
- (2) in the case of the macro-systems, like a complete society, because:

- (a) they lose the support of their citizens or,
- (b) they are dissolved by an external intervention.

In the first case, the economic subsystem of a society has finished its cycle of life when unable to satisfy the basic necessities of the citizens and, therefore, it becomes disfuncional for the maintenance of the collective system. Examples of the loss of viability in a socio-political system are the German Democratic Republic (GDR) and of the external intervention, the NATO aggression against Yugoslavia that ended in the separation of Kosovo.

Put another way : when the historical viability of an established social system has been drained, for example, slavery, feudalism, capitalism or Soviet socialism, you open the door to a qualitative change in behavior, that is to say, to a " state change" or quantum leap, either down the road to an implosion, as in the case of the Soviet socialism; or down the road to internal evolution or alternatively to destruction by the global environment. For human practice, the concept of the life cycle of a social system is very important, it determines if a historical actor is an El Cid or Don Quixhote, i.e a hero or tragic clown.

1.2. Structural exhaustion of bourgeois institutions

The conclusion on the end of the bourgeois civilization is derived of three discourses:

1. The structural exhaustion of the basic institutions of the bourgeois system;
2. the appearance of structures constituent of the new post-bourgeois civilization within the heart contemporary global society and,
3. the logic of the humanity's social evolution.

1.2.1. The national market economy. The Bremen polymath scientist Arno Peters has the credit of having discovered the principle of the future socialist economy, one able to surpass the structural deficiencies of the national market economy. From his masterful exposition of the topic in the work, "End of the Global Capitalism. The New Historical Project" we reproduce the following :

The economy, like any other current phenomenon, can only be understood in its process of becoming. It is based on the work of all previous generations and it is, at once, the foundation on which the life for future generations will rest. Like technology, politics, law, morality, science and art, the economy relates in diverse ways to historical evolution, is influenced and created by it. So, for each stage in human development there corresponds a certain economy. To answer the question, whether the economy is today organized reasonably and if the great mass of contemporary economic theory and its application are fit for current purpose, we will have to look at the development of the humanity from a specifically economic standpoint.

If we understand "the economy" to mean the group of all the activities and institutions dedicated to the satisfaction general needs, then the beginning of our economy dates back approximately eight hundred thousand years, when the first rudimentary tools were manufactured. Until then, men lived as part of nature like animals. Then people began to transform objects and

materials which they found, so as to make these usable for human purposes. With this transformation of the nature by means of labour, economic history began. Observation, energy and humanityal dexterity soon allowed humanity to engage in regular and directed activity. According to archaeologists, this early economy was focused on meeting the needs of individual human beings. With the improvement of the tools a first division of labour began inside the family and the extended family. Alongside knives, hand axes, chisels and sewing needles appear fish-hooks, spears, harpoons, bows and arrows. The men become hunters, the women gather berries, nuts, tubers and fruit and take care of the children. This phase of the intrafamilial division of labour began approximately eighty thousand years ago, when humanity took its first steps to protect itself from an inclement climate using fur clothing.

About twelve thousand years ago, the domestication and breeding of animals and the discovery of the agriculture led to a new phase in economic history. Humanity begins to produce its own food. [...] Although the quantity of its food varies between harvests, it no longer varies day by day. Their existence becomes surer. Humanity builds huts or houses for themselves and their provisions and settles down. Interpersonal relationships become more stable. Spare food is exchanged for other products (e.g. flint, copper, brass, clay vessels). Villages arise. Their economy concentrates on meeting the needs of the family and tribe. Tools and the weapons are personal property, the earth, common property. The exchange of goods is normally still carried out by the producers themselves.

With secure supplies of food and the construction of stable villages the population increases. Production and consumption become more varied, people want ever more distant products, longer distances separate producer from consumer. The need for transport, storage and distribution emerges, and with it trade. Men, whose work as hunters had lost its meaning after introduction of the cattle-raising, turn to these activities. Goods are taken from producers, to consumers, they receive others in exchange, which return to the producers.

Later on, they buy products from the producers and sell them to the consumers on their own account, which gives them bigger gains than they can obtain fromk just providing a service of transport, storage and distribution. They take on the risk that the goods may be lost, stolen or find a buyer only after long delay. In the few communities that had progressed toward the agriculture and the cattle raising, this transition to commodity exchange began approximately seven thousand years ago. The profession of warrior whose job was subjugating or despoiling other tribes and protecting of kith and kine against the aggressive rapacity of strangers, arose around the same time. There

are indications of combat between, and raids upon, neighboring tribes even earlier. However, in these actions all the men of the tribe participated. The profession warrior, like that of merchant, no longer involves having to work productively to support oneself. These occupations arise when villages start to grow into cities and city-States.

More than five thousand years ago, this new economic order, created by the trade and war, had imposed itself on such a large partion of the then inhabited world that we can speak of the beginning of a new era, that of the national economy, which slowly overtook the local economy. In this context, we understand by "nation" a state entity that has grown historically with its own traditions and hegemonic system of control; we include here, all communities who, in their character and structure, have gone beyond the point of the local autarchy, from the formation of the first city-States five thousand years ago, down to the present day.

This era, that of national economy, began around 3000 BPE, when in the valleys of the rivers Nile, Tigris and Euphrates, Indos and Huang-Ho, big groups of people were united to tame the force of the rivers and to put their waters to use. By the construction of dams, reservoirs and canals they transformed arid lands into fertile fields and flourishing gardens.

A feeling of mutual dependence and of the communal strength arose from common work. People learned that big tasks could only be managed through their taking on fixed roles and that the existence one, could only be permanently secured through the regular activity of all. Humans give up their natural independence in order to win the greater security of an organized community.

The growing division of labour, improves the quality of products and raises labour productivity. New professions were created. People named everything and named themselves. Lever and wheel multiply their strength. The exchange of goods and trade lead to regular traffic. Seaworthy ships are built. Humanity carried out the transition from instinctive action to meditated behavior, it entered to the last epoch of its development. Metal working brings a breakthrough in technical thought and action. Writing makes human experience communicable, summarisable and inheritable. History becomes transmissible and the results of human creativity immortal. The subservience of man to trade and the private ownership of land lead to a subservience of man to man: in place of the old solidarity between and free and equal men, the orders of the master and obedience of the servant. The State arises as a stabilising factor of order within an ever more hostile and divided human society: power and coercion internally, war, robbery, subjugation, exploitation in the relations between tribes and peoples. Military organization and

the economy, replace the natural growth of the human community. Wealth and poverty arise. When all goods and wares are for sale, when all that is good and worthy is for sale, men lose their integrity: thus each victory on the road to the progress becomes a defeat. The epoch of man's loftiest creation turns to the epoch of his profoundest humiliation. Trade begat war and robbery. If today, at the end of the second and beginnings of the third millennium, we look back at the previous five thousand years, we realize that this era, through all changes of States, empires, dynasties, religions and social systems, had the same essential feature: the pursuit wealth and power, which, just as it broke through the bounds of local economy by trade, the war and rapine, brought the world to national economy. That transition that began among the few developed cultures of the great river valleys of the rivers, five thousand years ago, took place in Southern Europe, approximately, three thousand years ago; in Northern Europe, one thousand five hundred years ago, in most extra-European countries starting five hundred years ago, through colonial seizures by European powers, and with the last, most remote, tribes and peoples, within the last 50 to 100 years. Although islands of local economy persisted through the whole era of national economy, today, the inclusion of all families, tribes, peoples and states into the market-based national economies that the rich "master races" have organised, is complete.

Has it stood the test of time?

Can it found the global economy that lies before us?

The century just ending has brought more scientific and technical advances than the whole previous world history, yet 40,000 starve each day. Mass production gave to the many, goods previously reserved to the few. Transport and communication have brought peoples together. If a hundred years ago four peasants were needed to feed a city dweller, now, mechanization, selective breeding and chemistry have allowed a farmer to feed to 25 people. Nevertheless, on Earth, want, deprivation and misery prevail. A billion people live in affluence (a tenth of them in abundance), three billion in poverty, more than a billion hunger. From 1945, 600 million people have died of hunger, this is ten times more than the deaths caused by the Second World War, daily, across the world 40 thousand children die for the same reason, while our warehouses overflow and the European Union pays for fertile fields to lie fallow.

One in three is unemployed even in rich lands there is poverty: in the 12 States of the European Union, 44 million people live in poverty, this is 14% of the population; in the United States it stands at 10% of the "white" and 31% of the "black." And here the rich get richer every year. So there was a 62% rise in the incomes of the richest 20% in the US in the last 10 years, while,

the income of the poorest 20% of the population fell by 14%. Polarization thus grows within industrialized countries, just as it does in the relations between the industrialized and developing countries.

In the entire world goods and services of all type are urgently needed, but in spite of it, in Europe Western 35 million people lack employment; in the world as a whole 820 million, almost a third of persons of productive age. Speculation directs the flows of funds; this, ever more concentrated, global capital flow creates neither new jobs nor material values; it seeks not profit, but interest. The volume of the capital flows grew ten-fold in the last six years. marketbased national economies Daily, more than \$1,000 billion change ownership world-wide - only 1 percent of it, approximately ten billion daily, for the handling of world trade - 99 percent of money movement is purely speculative. The foreign credit balances of the banks quadrupled by more than \$8,000 billion since 1980 from \$1,836 billion, annually they therefore increased by almost 30%. The share of the pure interest payments as opposed to profit rose from 7% in the year 1960 to almost 60% now. In the richest countries, people consume four hundred times more than people in those poorer countries, this means that the inhabitants of Switzerland consume more in only one day than inhabitants of Mozambique do in an entire year. All these values are averages. The directors of the big industrial companies in the rich countries, earn as much in one minute as people in poor countries do in their whole life. And the incomes of the owners are higher still: a proprietor of mines in South Africa gets \$2,000 million a year, this is three times the annual income of the five millions of inhabitants of Chad.

If the mission of the economy consists of satisfying general need by means of a rational organization of labour, then we have to aver that our economic system it doesn't fulfill its task. Neither does there exist any hope that it can fulfill it in the future, because it is based on the system of a market economy that has an inherent tendency to to benefit the rich and to impoverish the excluded. And this polarization has become still more intensified since the end of political colonialism in the 1960s, when a lot of people expected positive changes. The share of the poorest 20% of world population in world revenue has shrunk from 2.3% to 1.4% in the last 20 years, while the share of the richest 20% has been increased from 74% (1970) to 83% (1990). The number dying of hunger has reached 40 million per year, in spite of the fact that the world grain crop, 964 grams per head per day on average, would be enough to satiate the hunger of all humanity (daily requirement 750 grs.). But in Europe 57% of the grains is used as animal feed and in United States 70% is.

It is neither demographic growth, nor nature nor humanity that is to blame for growing misery and hunger in poor countries, but our economic system, the market economy, one in which the products and services are not exchanged at their values, but at world market prices, one in which, from the '60s, has run more and more to the benefit of the rich industrialized nations. Thus, for a locomotive that Brazil could buy with 15 thousand sacks of coffee 20 years ago, today she has to pay three times more (46 thousand sacks of coffee). The value of that locomotive has not tripled in those twenty years, and the value of the coffee has not diminished. Only their prices on the world market changed, this determines the exchange relationship between industrial products, supplied in the main by rich countries, and natural products, supplied preponderantly by poor countries.

The overvaluation of industrial products continues despite rapid rationalisation in their countries of origin, which would have been expected to cheapen them relative to natural products. In 1990 the relative prices of the natural products (raw materials and agricultural products) versus industrial ones had gone down to 59% of the price that they had in 1980. Consequently, it lowered the financial share of poor countries in international trade international from 43% (1980) to 26% (1990) - not quantitatively and nor in value, but due to their prices on the world market, these have become the lever of exploitation of the non-European world since the end of political colonialism.

But not only has political colonialism run out of time, the epoch of national economy which has shaped the economic world for five thousand years, also draws to a close. The world is on the point of coming together, into a single vital space. We are beginning a new era in economic history, the era of the global economy. The transition we are now seeing, was prepared the scientific and technical achievements of the last 150 years. The car and aeroplane, the motorway and railway, brought people closer and closer together. The exchange of goods has been simplified and accelerated. With electricity, energy become transportable. Petroleum, natural gas, nuclear, hydro and solar power, cheapen the production and global transport of goods. A global network of telephone, radio, television allows people to witness events simultaneously across the whole world. A language develops into a world language, several currencies are usable worldwide. Rationalization and automation increase productivity; computerization approaches the stage of self reproducing automats, a step which, by reducing labour time, can assure the basis of life for everyone. But a prerequisite for achieving such a general, world-wide security in living conditions, it is an economic system adequate to the task. The system of national

economy and the market economy upon which is based, adequate till now, is no longer so. Is it possible to switch this economic system to meet the requirements of the global economics?

The principles of the non-equivalent economy, the underlying principles of national economy within which we have been confined in recent centuries are:

1) The objective of the economy is the prosperity of one's own nation.

2) The state has to protect the interests of the economy externally by customs, taxes, import restrictions, to promote it internally, reducing taxes, privileges, subsidies, and, to bring power to bear (embargo, sanctions, war) world-wide.

3) The State should not limit the free development of the economy.

4) Land, natural resources and means of production are private property.

5) The structure of the economy is hierarchical, all power of decision is in the hands of the owners of the means of production.

6) The types and the quantities of products, as well as the distribution of those products, are regulated automatically by means of supply and demand (market economy).

7) The market economy based on the free competition, automatically leads to harmony between the individual and social interests.

8) Through free competition, the price of every product arrives at its "natural level", one which, in the long term, is equal to their value.

9) The human labour can be bought, its price is determined by means of the supply and demand, the same as the price of any other commodity.

10) The pursuit of individual profit is the decisive and final motive power of the economy.

These theories of the market economy don't coincide with the reality (6,7,8) or they describe a situation without whose change the global economy cannot achieve its true objective: the supplying of all the people of the earth with essential goods and services (1,2,3,4,5,9,10).

Voltaire described the nature of the national economy, condensing these ten points, in a single sentence: "It is clear that a country can only win, if another loses", and in our century, Pareto said it in the following way: "Nobody can improve their position without worsening that of another." But in the global economy, a country or an individual is not entitled to win at the cost of another. But is there an economic system, that differs from the market economy in this crucial point?

Is there an alternative to the national economy?

As alternatives to the national economy, we find, if we examine economics, its history along with its basic underlying principles, we find only two archetypes: The equivalence economy, under which the mankind lived virtually for 800.000 years since beginning of economic history, and non-equivalent economics, that began to put the economy on a new basis approximately 6.000 years ago and which subjugated the whole earth to its system over the last five millennia [...] The two economic archetypes are in principle incompatible. [...] Total equivalence between Input and Output (input and production- H.D.) is as characteristic of the equivalent economy, as their inequivalence is characteristic of the non-equivalent economy.

If equivalence economy, as the original form of economy, is the only alternative to the non-equivalence economy that is dying before of our very eyes, then one has to wonder: how our current non-equivalent economy really arose when it could not complete the true objective of the economy: the satisfaction of general need. Let us return then to the beginnings of the economic theory.

Aristotle is the founder of scientific category theory, like logic that advances through correct concepts, judgments and ends up grasping the nature of the things. Two thousand three hundred years ago he had established separate and independent sciences and also economics. He is their first theoretician; theoretician in the true sense of the word, someone who finds and describes the principles of the reality by means of the intelligent observation. He sees the economy against the background of politics, ethics, law and history. In the philosopher Aristotle's economic theory, "economy" is the name that is given to the art of the acquisition (*Erwerbskunst*) whose content is the creation of the wherewithal necessary for the sustenance of the family and State, that is to say, or the satisfaction of needs. On the other hand, Aristotle describes a second type of art of the acquisition, contrary to the first, is unnatural, artificial. This second type of the art of the acquisition doesn't belong to the economy (*Ökonomie*), but it represents phenomenon in its own right, *chrematistic* (= enrichment). "Because is closely resembles that form of acquisition of goods we have just been discussing", the Greek thinker says, "a lot of people believe that they are one and the same. But they are not the same"¹

In Greece and in Asia Minor, Aristotle still knew of rural communities, in which goods were, in the majority part or almost exclusively, directly exchanged by their producers on an equivalent basis. He says in this respect: "Such a technique of exchange is not contrary to nature and is not a form of money

¹Aristotle, *The Politics*, I.ix.

making; for it keeps to its original purpose; to re-establish nature's own equilibrium and self sufficiency." Then, the philosopher describes how with the appearance of the money (the first currencies were coined in Asia Minor, three hundred years before Aristotle) there began a second type of the art of the acquisition, trade, which is no longer dedicated to the supplying of needs, but to the maximisation of profit. For Aristotle, this enrichment (chrematistic) it is an unnatural use of human abilities, a disturbance in the economy.

Then, Aristotle points out the insatiability of chrematistic : while in the economy, the satisfaction of need has natural limits, chrematistic seeks an unbounded increase in money: "It is justly criticized", the philosopher says, "because it arises not from nature, but only from men gaining from one another. Very much disliked also is the practice of charging interest; and the dislike is justified as the gain arises out of currency for itself, not as a product of that for which currency was provided. Currency was intended as a means of exchange. Hence its name, for each animal produces its like, and interest is currency born of currency, So of all types of business, this is most contrary to nature." Finally he rejects the selfishness, which culminates in chrematistic , in general form: "The fact that each loves oneself, is in our nature. On the other hand, the selfishness is justly criticized, since this doesn't consist in pride, but in that one is wanted more than that." For Aristotle the economy is not autonomous, he means that it doesn't have its characteristic laws. By nature, humans are community forming beings who find fulfillment not alone, but in the *polis*. Thus Aristotle's economics is always theory of *polis* and humanity. So for him the supreme science is politics upon which economics, military strategy and rhetoric depend.. It is for that reason that Aristotle didn't devote a particular treatise to economics, it is a part of his books on ethics and politics.

In the works of Aristotle's the thoughts of the Greek philosophers from the time of Pythagoras are merged and unified. So, his economics is a summarized expression of the philosophical-political economic teachings of this epoch.. They also include the insights and knowledge of his teacher Plato and of the latter's teacher Socrates, in their key theories. Thus Plato revealed the insatiability of chrematistic as the origin of war: Plato described humanity's necessities - food, shelter, clothing - and their satisfaction in the "measured and healthy polity." He compared it with the "excessive polity", where they go beyond the bounds necessary and where desire for lucre leads to abundance and luxury. The land and soil that had been enough for our necessities, were now too small. "Then, we will have to take the land of our neighbors, as well as ours, and from now on we will have to go to war." AND Plato concludes: "We have found the origin

of the war in that whose existence for whole States as for individual citizens, is generally the cause of the misfortune"; - in the intemperance, that seized the economy with the Chrematistik.. Starting from his principle of the precedence of the whole over its parts, Plato taught that the economy served to sustain life as a whole, and that it should be a means rather than end for both States individuals.

Socrates, Plato's teacher, had already stated that, in its most general form, the decisive economic criterion was: "The greatest virtue is modesty." That was the rejection of the intemperance, that chrematistik (enrichment) introduced to the economy. The principles of equivalent economy, all these insights, were integrated in Aristotle's economic theories whose most important characteristic I want to summarize here:

1) Man is a political animal, whose true self is realised in the Polity and its laws.

2) Other than in the service of the Polity, the economy has no independent or autonomous function.

3) the task of the economy is the satisfaction of human needs.

4) Just as human needs have natural bounds, so too do the economy's acquisitive strivings.

5) a necessary supplement to the production of goods within the economy is their exchange, by means of which different products of equal value are exchanged (equivalent) without profit.

6) as distinct from economic activity, there exists chrematistic (enrichment) activity based on trade and moneylending whose sole objective is monetary profit. It diverts the economy from its free development and prevents it from carrying out its true task.

7) Chrematistic search for profit knows no bounds. It is insatiable unnatural and hostile to life.

8) Chrematistic is the ultimate cause of trade, of robbery and war.

9) Want and abundance, poverty and the wealth were created together and cause one another.

10) Life is activity. Only an activity carried out for its own end brings lasting satisfaction. A life devoted to making money it is not a life worth living.

The argument by Arno Peters about the national economy ends here.

1.2.2. Formal democracy. Actually existing formal democracy has a major characteristic in common with the hitherto existing socialism: the distance that separates each from the original ideals of their founding fathers; distances comparable to those that separated, say, Soviet socialism from the socialist philosophy of Karl Marx's uscripts Paris manuscripts.

The difference between the fundamental doctrines of the formal democracy and contemporary reality, is apparent in their whole political structure, beginning with the pretense that it is a representative democracy.

The myth of representation is, that in a democracy, political sovereignty rests with the people. Since the majority cannot exercise it directly, they delegate it by means of elections in parliamentary representatives who, in turn, make up the organs of state power. All branches of the state power, therefore, emanate directly or indirectly, from popular sovereignty. They have, in other words, legitimate power. This apology for parliamentary democracy is coherent, but has nothing to do with reality. In reality, Members of Parliament don't represent those who elected them, they substitute for them. Elects to serve to the people, they actually serve two other masters: the establishment and their own interest. Frequently, governments are not even representative from a formal standpoint. The American president, George W. Bush, for example, it was chosen in 2000 in fraudulent elections, with the minority of the effective votes representing barely one quarter of the electorate. And the representation of women, non-white ethnic groups, the unemployed, etc., in bourgeois parliament, is always well short of being proportional.

One pillar of liberal democracy consists of the notion that law is born from debate, from clash of opinion, rather than vested interest. But among the parties of modern parliaments, the place of debate has been usurped by cold calculation of interest and opportunity for power; in its treatment of the masses it rules by manipulation by the "manufacture of the consent." No Truth emerges from parliament, "the people's chamber"; it is a market, one where the distribution of power wealth among the elites is negotiated. Fundamental concepts like "government by debate"; the primary responsibility of an MP is to the people - not the party, nor the City of London - , the absence of arcane imperii (State secrets), etc., seem now but romantic memories, dead letters; completely disconnected from actual practice. In actually existing democracies, parliament, ruled by corruption and party Whip, manufactures consent for transnational oligopolies: mass indoctrination.

Separation of powers constitutes the axis of the State in bourgeois law. However, its position is similar to that of Parliament, because this doctrine of Montesquieu - designed to control of the power of the State - can only be carried out if the three powers are separated in two dimensions: the juridical and the social. The questions that Bentham raised with Montesquieu relating to how the separation of powers could ensure liberty, were all three powers controlled by a single social group, have no simple answer. The constitutional separation of powers must be supplemented with a balance of social forces, that is to say, each power: legislative, executive, judicial, has to represent to different social classes or strata.

Montesquieu sensed the problem, noting that "when legislative power and executive power meet in the same person or the same body, there is no freedom", but an "awful despotism." If we consider the situation of the separation of powers in today's world, it is obvious that in the majority of States there exists an "awful despotism" of the dominant class that has little to do with the original intentions of the doctrine's creator. Firmly under the control of oligarchy, the principle is treated with colonial wisdom: accepted, but not acted on.

Another of formal democracy's doctrinal pretenses is that the electoral system ensures the participation of the majorities in public affairs. It is difficult to imagine a more demagogic claim. The reason being that the electoral system ensures only, equal access to state power and rotation among, the different fractions of the elite, not the people. If in certain circumstances, the majority are able to choose

a truly popular and democratic government, the ruling class ignores its own constitutional rules and organises a coup d'état. This cynical mechanism is known in "political science" as the paradox of the democracy. Democratic institutions are only for the friends of the democracy, not their enemies. In plain English: formal democracy is just for friends of the bourgeoisie, it cannot be used by those wanting peaceful change in the structure of society : a lesson for which Salvador Allende paid dear.

The loss of sovereignty of the national States faced with globalization, reduces still more the already limited importance of formal democracy. The nation State suffers a double subordination in the world system: in the political, cultural and military spheres it is subjected to regional and global States, and in the economic it depends on regional and world markets. Although the officials of powerful bodies like the World Trade Organization of Trade and the International Monetary Fund are not elected by a single citizen, their powers to decide on national matters are far greater than those of any democratically elected representative.

There is a sixth problematic phenomenon in liberal democracy, particularly in the Third World, what John Locke called "prerogative power." This fourth power in the system of bourgeois domination consists of "power to act according to discretion, for the public good, without the prescription of the law, and sometimes even against it." In practice, in third world democracies, the prerogative power is expressed by means of executive ordinances and statutes, when the majority don't accept the decisions of the elite. It is the "legal" marginalisation of parliament.

A last constituent element of bourgeois political philosophy deserves to be taken into account: the ethics of political society, as analyzed by Hegel. Those who understand nothing of Hegel, think the philosopher idolized the State. But Hegel was neither idolatrous nor reactionary. He understood that the polarization of the bourgeois society into rich and poor arose from irreconcilable class antagonisms and that only an ethical State could be the guarantor of public wellbeing against special interests. Inside the class State, this idea is, of course, a chimera, as Marx summarily experienced in his political deportation from Germany, for the crime of siding with the poor. Far from representing the common good, the State is booty for oligarchic interests, a Calibán whom they use to despoil the majority of the population.

The oligarchical-plutocratic character of liberal democracy is as evident in the First as in the Third World, where the state has become the prize of the contemporary bourgeoisie's two main political fractions : conservatives or Christian-democrats and liberals or Social-démocrats. Their cabinet members and political leaderships are drawn from a narrow elite of businessmen, political and military figures, who, endowed with considerable personal wealth, circulate within these three spheres of power. There exists, however, a fundamental difference between plutocratic democracy in the First and Third Worlds. The first relies upon the support of the majority of the population and its dominant class, exhibits, for now, the character of being a leading or directing class. In the Third World it is the dominant class, and nothing more.

The one significant historical contribution made by the bourgeoisie in the advance toward a just society, is the Rule of Law, with its key elements: constitution, separation of power and formal rights. All these measures are anti-absolutist. Their intention is to politically regulate the power relationship between

state Leviathan and citizen, by a negative demarcation of the powers of the former. Since the problem of the excessive power of the State will exist so long as there are class societies, the negation of formal democracy can only benefit the State and the power elite, not the citizen. Therefore, the logical conclusion is : formal democratic rights are an indispensable, necessary, but not sufficient, condition, for future democratic society ; they should not be replaced, but be enlarged in the direction of social and participative rights.

In the same way that feudal political and economic absolutism underwent democratization in the direction of formal democratic rights, the political and economic absolutism of big capital must undergo their own democratization by the extension of the majority decision making into all the social spheres. However, the democratization of the bourgeois system is equivalent to its negation, because their mainly plutocratic character is incompatible with real democracy in the political, economic, cultural and military spheres. Real democracy is the end of capitalist civilization.

The bourgeoisie, like all previous dominant classes, never accepted the essential principle of democracy, that is, control of the power by the majority. It is unwillingly wedded to some procedures of formal democracy, forced by the necessity of attracting the masses in the conquest of the feudal elite. But, in their soul they have always dreamt of a lost feudal paradise, where economic power translated directly to political power. Private property rights that the multitude could not touch, prerogatives of class justice; the annexation of public powers and economic privilege by privatization of public assets; control of minds by the inquisition, reduction of workers to serfs, are the nostalgias for paradise lost; hopes for its speedy regain. For that reason the political tendency that characterizes it nowadays, it is not progress, but regress.

1.2.3. The Class State. All human communities need to organize in combination to solve three big tasks that can't be solved by individuals: work, war and public order. The transformation of nature by labour of into goods and services for human sustenance, cannot be done by one person, even in such rudimentary activities as hunting. Likewise, the community can enter in a violent confrontation (war) with other communities or conflicts arise between the members of one community.

These three great interactions, with nature, with external human communities and with citizens of the same community, therefore, are what make the establishment coordination and collective decision mechanisms within the community indispensable, that is to say, the formation of political authority.

The methods which the political instance has at its disposal to implement decisions, are essentially, twofold:

- a) moral authority or legitimacy consisting in the recognition of its right "to govern" on the part of the governed and leading to voluntary following of its decisions and,
- b) the use of, or the threat of the use of the physical coercion.

Fundamental in all this is that the public authority that takes and executes decisions is not something separated from the community, but rather, is usually the same community as a whole. To that type of political coordinating authority we give the designation : proto-state.

The three great social interactions which give rise to the need for collective or supra-individual coordination, allow in certain circumstances, and starting from a certain level of labour productivity, the exploitation of and dominance over both nature and human beings, causing, in consequence, the division of the society in antagonistic classes, this throws civil symbiosis into conflict because of problems of class, patriarchy, racism and ecological destruction.

When this happens, the proto-state undergoes a qualitative change. Their original purpose, as administrator of the functions common to society, becomes secondary. Their new purpose, their primordial and decisive purpose, consists in defending the interests of the economic elite, and protecting the system of exploitation and dominance by this elite. From a committee or body in the public interest, a representation of the general will of the people, comes a State serving the peculiar will of the dominant class, thus a *class State*.

It has to continue helping meet certain general society needs, like health and public order, but all these general functions are filtered by its class character. If there is insufficient money to meet foreign debt and the education at the same time, the bankers get paid first. If the budget is too small both to repay the internal debt and defray costs of public health, banks don't come second. The peculiar interest of the system's masters determines and distorts all the general functions of the State. With the conversion of the democratic public authority into a private agency of security and repression in the service of the economic elites, the function of physical coercion ceases to be a power exercised by the whole community; it separates off into specially organized in armed bodies, the police and army, under the control of a State which in turn is under the control of the dominant class.

This is the meaning of the class State that historically substituted itself for the proto-state around six thousand years ago and which will disappear with Participative Democracy. Into its place there will step a new public authority, one that will prioritize public interests and which, by losing its class functions will lose its repressive nature. The notion of the representativeness, which in our bourgeois plutocracy is essentially demagogic, it will then have recovered a real political meaning, in those public functions that require such representation.

1.2.4. Bourgeois man. Exchange value's victorious march through history, energized seven thousand years ago with the step from barter to trade, advancing later over the hecatombs of victims to "progress" and civilization, approaches its end. In its last two hundred year, the stage of modern capitalism, it unceasingly revolutionized productive forces and social relationships. But it did not stop there. It generated a corresponding anthropology, one required by its mode of production: a human being, serving its interest, as producer of goods and realizer of surplus-value.

Humanity's most valuable gift, reason, is robbed of all critical elements, reduced to pure instrumentality. The more criminal, the more amoral, are the ends, then instrumental reason is at their service, its only function, contributing the means: from the daily robbery of surplus value from the worker, to the scientific slaughter of opponents in the underworld of our global village. The ethics of civic solidary symbiosis has been replaced by a law of the jungle that justifies the suffering of half of humanity, on the grounds of their "inability" to compete in that modern Roman circus which we call the world market. It repeats the bread and circus policy of Roman emperors, but only fifty-fifty, because as opposed to of the

Roman urban proletariat, that of today's global society lacks the bread which an empire knew how to provide to those who, two thousand years ago, it recognised as citizens without means of support.

In capitalism, the market is the continuation of war by other means, competition without mercy is lauded for the destruction of others, because it annihilates their economic means of reproduction. It is the foundation of capitalist society but an eminently destructive and antisolidaristic principle, one that threatens the secure existence (work and small property) of the citizen, it produces as an iron law those social relations and personality types that Hobbes describes in his *Leviathan*.

The absolutization and mystification of the market, its actual transubstantiation in Malthus and his contemporary coreligionists, constitute the basis of a new and reactionary metaphysics. The social contract social of Rousseau is replaced by new metaphysical references, the market, invested with the attributes of the Old Testament god Jehovah, with all his incomprehensible brutality and omnipotence. When somebody loses the basis of their bourgeois existence - their work or means of subsistence - blame the world market. Youth finds no employment or place in higher education, is because they are not "competitive" in the market. If a worker is fifty and no longer "productive", he must accept this condemnation of the market and become unemployed, like the sentence of an agnostic god or an anonymous inquisition that has decided against him, and to which he has no leave of appeal. What Greek tragedy called blind destiny, that anger of almighty gods, which reduces both individuals and peoples² to dust, is today named : market.

Capitalism's social bargain involves an unconditional retrogression for the subject - the only entity of in the universe endowed with reason - and their prostration before a law value that imposes its interest under the double ideological mask of the "decisions of the market" and the "philosophy" of social-Darwinism. It is the worst offensive against the subject and the utopian vision - who have together been the essential driving force of two thousand years historical progress - since the totalitarian regimens of 1930s.

The market as a self-regulated autonomous (cybernetic) system - as described by ideologists of the capital - is, of course, propaganda code that only exists in the theology of bourgeois economists. The new god, supposedly incognito and almighty in his decisions that they call "world market", it is as identifiable as the old Jehovah. He doesn't stride the heavens nor wear a biblical beard, he goes by Mercedes and wears Armani. He has no decalogue, no ten commandments, just one : maximize profit. His temple is the stock exchange, his mundane residence a mansion in a posh neighborhood. And yes, he is cause of, and concrete culprit for, the horrors he conjors up against humanity. Five thousand multimillionaires and the professional politicians in their service, are responsible for the Dantesque hell in which billions of human beings live. It is this global plutocratic elite whose investment decisions in search of the maximum profit, determine the rates of unemployment, of hunger, of ecological destruction, of foreign debt and warlike conflict. Anything but anonymous, neither almighty nor cybernetic, is this market which pulverizes us. But what it is, is an anti-democrat, anti-ethical regime, built and operated by a world oligarchy.

²of the Third World.

The national economy of market capitalist reduces to the homo sapiens to homo oeconomicus; to the sole status of what their economists sagely call human capital. It is no more than a form of appearance of capital, existing alongside the twins: fixed capital (technology) and money capital. Thus, the system and its Mandarins confirm what Marx expressed with transparent clarity one hundred and fifty years ago: human being are, and can be no more, for the bourgeois than variable capital: a fleeting concretion in a perennial exploitative social relationship.

The definitive breakup of solidarity and historical conscience - last defences of the poor - this is the necessary condition for the definitive implementation of the total market utopia and the return of the third world majorities to the paleolithic mental stage of evolution, where reason's infancy condemned homo sapiens to a doubly enslaved existence : to both objective forces and to their uncomprehended subjective projections.

Incipit vita nuova ("the new life begins") is the flag and philosophy of the architects shaping the new world in their image: investors, executives, speculators and international politicians who, like some biblical genesis, are building, by means of an autocratic process, a new edifice for man, beyond all democratic control by the world's population. But, what is at stake is humanity's future and this future cannot depend on mere utilitarian concerns or mean interests that confuse their successes in exploitation, with divine predestination and the law of the value with human essence.

The subject's destruction is unavoidable in bourgeois society. That which the philosophers of the Frankfurt School, Adorno, Horkheimer and others, deplored seven decades ago, is the logical consequence of the way the critical citizen has become dysfunctional to the system's institutional environment. Faced with the growing contradiction between the development of the productive forces- a social wealth which, for the first time, makes possible the full self-determination and rational ethical and aesthetic realization of the subject - and the system's armoured cuirass of plutocratic-formal democracy, the atrophy of the subject as a conscious entity becomes indispensable in averting a massive rebellion against the system.

Promethian subjects become a danger and impediment to global capitalism, because they can contrast what is to what might be. They see that the system is stealing their lives and respond to this robbery. And to the extent that the contradiction between the material abundance of the new millennium, and those restrictions which formal democracy imposes on the necessities and yearnings of the subject, becomes worse, it increases people's wish to fight for a qualitative change. Then, being unable to democratize either the economy or bourgeois democracy, subjects will arrive at the obvious conclusion : the need for another civilization. The bourgeoisie is sitting on a bomb of time. When it explodes, they will be replaced; by governments who will return to citizens their stolen future.

1.3. The realm of freedom becomes possible

Three factors have impeded a more democratic society:

1. The exploitation interests of elites;
2. lack of productive technology;
3. ignorance of the factors that jointly determine the evolution of society.

Overcoming the first factor is a problem of power; the second is, basically, a problem of the past, solved by the scientific-technological advance, as to the third, it is on the way to solution, through greater and greater understanding of both society and its essential element, human beings.

1.3.1. Scientific knowledge of human beings. Historically, desires to build more just societies have been, in certain sense, gone against common sense. Without scientific knowledge of the main constructive element, human beings, a desire to founding a just society was equivalent to wanting to build the roof of a building, before the foundation or walls.

There was, of course, another possible road. In the face of the ignorance about "human nature", benevolence, metaphysical or religious speculation and, in methodology, "trial and error" steps had to substitute for, what would have been, the firmer basis of a conscious and planned evolution of society. In spite of this rough and ready road to progress, bounded by the insights of epirical experience and a rather "primitive" pace of thought, the last millennia have seen considerable advances made in many aspects of the human existence. Today, however, the task can be approached task with greater efficiency, realism and optimism that at any previous moment, because we are systematically starting to understand the two key elements of the human enigma : its genetic code and nervous system.

Breaking the genetic code gives us a key to understanding the biological potential of human evolution. This knowledge will clarify the possibilities of, and limits to, cultures influence on this potential. Objective knowledge of the interactions between the biological nature of human beings and their social environment they will provide the epistemological basis for the new society. Up to now, the range of interpretations of "humanity nature" it oscillated between the horiffic vision of *homo homini lupus* in Hobbes to the paternalistic illusions of the "noble savage" of Rousseau, without there being any possibility of scientifically establishing the human condition.

The situation changes appace. Molecular biology has already finished a registration of the genetic map, identifying the locations and the quantities of genes in the chromosomes. This advance it is comparable to the registration of a book, with all its pages (chromosomes) and all its lines (genes). what remains is the second step : identification of the "meaning" of each sentence in this "book", that is to say, the decoding of the functions of each gene inside human cells.

The second constituent system of human practice is the nervous system. In this system the effects of the biological DNA converge on historical "DNA" that is to say, the set of cultural influences that socialize and guide an individual in society. The brain and, in the main, the self, is a system of virtual reality that analyzes internal information (from the person) and that which comes in from the environment, to design survival strategies for the subject . To the extent that we scientifically understand how this system work, its understanding in hazy (qualitative) terms - like humor, depression, memory, trauma, intelligence, etc. - will be replaced by objective knowledge of potentials and limits, providing the basis for a realistic assesment of possibilities for the future of society.

1.3.2. Society as a Complex Dynamical System. Frontiers between utopian desires for the future and viable new historical projects, are clearing. Scientific

advances allow the growing identification of potentials and limits to the evolution of social organizations. The theory of Human Complex Systems Dynamics of (HCSD) is one of these mechanisms that bring t the old endless debates on anarchy versus centralism, vanguards versus majorities, hegemony and dominance, into the domain of the rational-scientific discourse.

Society as a Complex Human Dynamical System or Human Adaptive System (HAS) can be understand in the following way. A system is a group of parts that fullfills four requirements:

1. The parts maintain certain relationships to one another;
2. the system distinguishes itself from the environment, although limits are not very precise and can be diffuse; in other words, it has identity;
3. the system carries out certain characteristic functions of the totality that the parts by themselves cannot carry out;
4. achievement of these functions allows to the system to meet objectives that necessary for its survival.

A system is dynamic when it changes over determinate timescales. These timescales are defined by the investigator. The complexity of the system is defined as a function of the greater or lesser diversity of movement that it can carry out. Following Friedrich Engels in *The Dialectics of the Nature*, we can distinguish five universal types of movement or change that in ascending order of complexity are: mechanical, physical, chemical, biological and social. The more complex types of movements or more complex changes are included in the less, but are not reducible to them. That is why, a mechanical or biological analysis of society is necessarily incapable of grasping the logic of social behavior appropriately. Human organizations share a set of characteristics with the complex dynamic systems (CDS) of physics and biology. Let us enumerate some of the most important:

- (1) They are open systems, that is to say, their interaction relationships with the surrounding world are vital for their survival.
- (2) Such systems modify the environment in which they develop.
- (3) All systems of this type always fulfill a certain function or they seek to reach certain objectives.
- (4) So that the CDHS can carry out those objectives, it prepares - when you it is a macrororganización like a society, a State, an university - of a property, generally known as self-similarity that is a structural similarity among the different (vertical) levels of control.
- (5) They are systems that carry out a continuous exchange with their environment through energy flows, information and substances that are transformed or metabolized by the system. These systems have feedback mechanisms - in the case of the CDHS, opinion surveys, intelligence services, media - that inform to the center of control of the system, for example, a State or government, if behavior approaches or deviates from the proposed or planned objectives.
- (6) The CDHS has an ability learni in which it is influenced certain factors:
 - (a) the quality of the change detection subsystems (sensors) ;
 - (b) the quality of information processing ;
 - (c) the speed with which it is able reorganize in event change, versus the inertia of the status quo;

- (d) the absolute size of the population making up system; for example, the survival of a population in illness or war, it depends in considerable way of its absolute size;
 - (e) the existence and incidence of historical or social memory : identity.
- (7) CDHSs are generally formed by other systems which we call subsystems, which, in turn, are formed by yet other subsystems to form a hierarchy of systems.

To understand the possible development of a society it is necessary to take into account, besides the above-mentioned characteristics, two properties of their environment. The first one relates to the fact that the behavior of the environment is partly predictable, and partly, unpredictable. The second relates to whether the environment is friendly (fertile soil), neutral (semi-arid soil), hostile (desert) or antagonistic (mountains above the six thousand meters high), to the existence and survival of the system.

Those characteristics force the CDHS to be organized in a way that reflects both aspects. Their structure and internal operation have to contain at least two parts: one that reflects and respond to the predictable, planable, controllable part of the environment; and another that reflects, and has the capacity to elaborate adaptive novel answers to, random environmental events.

The part that responds to the predictable we call the directive zone (DZ); the part in charge of persevering towards goals and executing tasks, among them, self preservation. The directive zone ensures the coordination of all the efforts of the system for the sake of reaching the three elements mentioned. The part of the system that reflects the unforeseeable, we call the zone of creativity or possibility. This zone should be continuously testing (creating), possible virtual solutions to random and chaotic environmental changes. The zone of creativity should not be conceived in such a way that tests or experiments on virtual strategies are carried out in a planned way nor organized by the directive zone. This should only provide inputs to and a basic infrastructure for the creative zone. In the creative zone, freedom of reflection has to be as wide as possible. Empirical systems resembling this model are the basis of fundamental research within the general system of science. Nobody ordered Albert Einstein, nor controlled him, nor could it have prescribed to him the investigations that led him to the revolutionary theory of relativity. Systematic but free creation, selection and investigation are essential conditions of this zone within the system.

The relationship among the two zones, their interaction with the environment, and the greater or lesser relative forces of each zone, depend at least on four factors.

- (1) On the nature of the system itself (on its objectives and functions). A military entity, compared with a scientific research institute, shows a marked pre-eminence of the directive zone over creativity.
- (2) On the concrete stage of development of the system. Anyone of these systems goes through different stages of evolution, including crisis, restructurings, partial collapses, etc. that impact on the proportions of, and dynamics between, the directive and creative zones. For example, the right to vote in bourgeois democracy has gone through different historical stages, being enlarged slowly from 1776-1789, finally after 1945 reaching, in most countries, universal suffrage.

- (3) On the relationship that, in the moment in question, foreseen and unforeseen events have in the environment. One can expect that any CDHS will organize its structure according to the state in which it finds its environment: war or peace, social revolution, economic crisis or depression, etc.. The more quickly and unexpectedly the environment changes, the more flexible and more creative the sociopolitical organization she has to be.
- (4) On the four characteristics of the environment already mentioned.

There exists, however, a fundamental difference between the human social systems and the CDSs: their basic element, the human being, provides society with an element of change and evolution that it is not present in other well-known systems. Due to the rational capacity and autonomy of *homo sapiens*, they can have interests, objectives and their own values that don't coincide with those of the organization to which they belong; a phenomenon that would be unthinkable in an animal society as an anthill or a beehive³. The cohesion and viability of a human social organization depends, therefore, in the medium term, on the collaboration and acceptance of a substantial part of the citizens. This, in turn, is essentially a function of the quality of life that the system is able to provide to their members, that is to say, of the execution of the "production and distribution task" of the ruling class. At the present time, the nonfulfillment of this task is the fundamental problem of governability for the global bourgeoisie.

1.3.3. Labour productivity. The dividing line between a utopian historical project and a viable historical project, is drawn by objective conditions; in particular, the level of development of the productive forces. The technological base achieved not only determines the possible economic relationships, but also the one type of political régime and the culture level that are feasible for a society. There is a synergy or simultaneity in this phenomenon that unites the three spheres: when the productive technology reaches its true liberatory potential in the economic evolution of the species - reducing the work necessary (for human reproduction) to a daily minimum - then it has also already developed a the necessary technologies for Participative Democracy and widespread culture. The realm of freedom can only begin simultaneously, not in a fractional way. One cannot have the realm of freedom in politics or culture, while the realm of necessity reigns in the economy. Today, that objective condition, has been realised.

The productive technologies developed since the latest scientific revolution - most notably in microelectrónica, where the first quantum computer has been built based on manipulation of individual atoms; in microbiology where the growing capacity of molecular design pushes back natural barriers in biological systems and in the nanotechnology - have increased the productivity of the human labour to such a degree that one can:

- a) guarantee the satisfaction of basic human needs for all the members of global society and,
- b) reduce, simultaneously, the necessary working day to a level that allows all citizens to participate in the public affairs of their respective societies. Throughout their history, human beings have lived in extreme dependence on nature. For

³Translator: the author may underestimate conflicts of interest that may exist in animal societies, see: Ratnieks, F.L.W., Wenseleers, T. 2005. Policing Insect Societies. *Science*, 307: 54-56.

first time, the shortage and precariousness of this relationship has been overcome. Freedom from hunger is already, at the level of the productive forces, a fact. But, until this fact is translated to the level of production relationships and political power, the people won't benefit from it. The bourgeoisie carried out the first step of objective emancipation with the development of productive technology; the second will be made without them.

1.4. The "genome" of history

A scientific analysis of the human history leaves clear its main evolution lines: from simple to complex; from isolated to integrated; from natural dependence on to relative control over, nature and, in society, from restricted freedom towards self-determination. In the economic plane we observe a vertiginous increase in labour productivity, caused by the advance of the technology. From the archaic existence of paleolithic hunter-gathers, via the first sedentary cultures with primitive tools, until the agrarian and industrial revolutions and contemporary robotized production, this process has reduced necessary work to such an extent that the working week in several countries is already only 37 hours, with an adequate standard of life. This tendency will continue to operate due to scientific and technical development, and already, the rational organization of labour in a democratically planned equivalence economy could diminish the working week to around 25 hours.

Political development shows the same dynamics toward greater degrees of freedom that we notice in productive technology. The first class societies directed by overbearing States, were born out of the coexistence of multiple modes of political conviviality, around five thousand years BPE, in different regions of the Earth. Around the 15th century absolute monarchies appeared in Europe. These they became relative or constitutional monarchies that, in time, with the rise to power of the bourgeoisies, starting from the 18th century, were transformed into formal democracies. Simultaneous with this political (and industrial) regional development European world dominance meant that formal democracy became the world's dominant State form. Today, this paradigm is in a process of transition towards Participative Democracy. The evolution of science shows the same direction: from very modest beginnings in astronomy and geometry several thousands years ago, it made a qualitative jump towards modern science with Newton, barely three centuries ago. Since then it has multiplied its explanatory power to the level at which, now, it is able to solve great problems confronting humanity and liberate the subject from the ghosts of the superstition, magical thinking and common sense fallacies.

With the establishment of quantum physics science took a new step towards human liberation. The certainty of Greek geometry, prolonged in the determinism in of classic physics, gave way to relationships of probability and statistical causality. The bivalent logic of Aristotle was reduced to a particular case of multivalued or dialectical logic. These developments replace a binary world view (good-bad) with a pluralistic view of the universe that is reinforced by the new finding of molecular biology that there are no significant genetic differences among the members of the human species. That is to say that the inequalities existing between the privileged 20% of global society and the remaining 80%, are not due to genetic

differences between Europeans, Africans, Asians and Latin Americans, but are the result of exploitative structures imposed on humanity.

Human rights are another example of the direction of evolutionary development. For thousands of years they didn't represent anything in class societies. When they entered the historical scene, they appeared as particular formal rights that limited the power of the State. Then they were extended towards collective rights and, nowadays, they embrace a third dimension: social rights. From having a negative character, restrictions on the dominant power, they have metamorphosed toward something positive and participative, to the fore in all aspects of society. We could follow this analysis of the objective tendencies of the global system, in law; in ethics where evolution advances from a formal ethics of values towards a material ethics; in socialism which has evolved from utopian socialism towards early socialism, scientific socialism, "actually existing" socialism, and at the present time, to the socialism of Participative Democracy; but the result would be similar to the one that Immanuel Kant discovered in his reflection on the world society "with civic intention", two hundred fifty years ago; that Hegel systematized two hundred years ago in his philosophy of the universal history; and that upon which Marx and Engels based scientific socialism one hundred fifty years ago: the "genome" of the history is programmed for the realm of freedom.

CHAPTER 2

Marx's historical project: Participative Democracy (socialism), 19th century variety

2.1. Historical projects: motor of the history

The most important concept in this work is the concept of a Historical Project. It is not a category used in the social sciences nor Marx and Engels, but useful to describe the model of exploitation, dominance and alienation that characterizes the practice of a dominant class. It embraces human beings' four basic social relationships: economic, political, cultural and military or, expressed in the language of historical socialism, productive forces, relationships of production and the political and non-political superstructure.

One cannot have a dominant class without Historical Project (HP) and, in this sense, we can speak of the Roman Historical Projects of the slavers, that of the feudal nobility, that of the capitalists and of the socialists. The concept is similar to Marx's "socioeconomic formation", but expresses with more emphasis the fact that the history is made in concrete configurations promoted by dominant social subjects, to which the dominated react.

The *raison d'être* of a Historical Project is the struggle over the appropriation of the surplus product. This struggle is not only carried out between two classes, but among Historical Blocks (HB) of different social forces, centered around the main main characters on both sides.

Generally, an HP includes four central elements that can be grasped in one or more documents or constituent manifestos:

- (1) The program or content of the change.
- (2) The subjects of change.
- (3) The times of transformation.
- (4) The form or modes of struggle.

The global society attaches, also, an orthogonal aspect to the four elements, in the sense that all have that to be thought of in their national, regional and global dimension.

The class character or level of democratic humanism of those projects can be measured by its position with respect to the three big structural obstacles to Participative Democracy: exploitation, dominance and alienation among the human beings' major interactions:

- (1) With one another, as economic beings (class problem);
- (2) With nature (ecological problem);
- (3) With the opposite sex (problem of sexism) and,
- (4) With other ethnic groups (problem of racism).

Oppression index	Exploitation	Dominance	Alienation	
7	Yes	Yes	Yes	Capitalism
6	Yes	Yes	No	Unreal
5	Yes	No	Yes	Unreal
4	Yes	No	No	Unreal
3	No	Yes	Yes	Socialism
2	No	Yes	No	Unreal
1	No	No	Yes	Unreal
0	No	No	No	Real democracy

TABLE 1. The three structural obstacles to a democratic world society.

To assess the possibilities that the New Historical Project has with respect to these structural obstacles, we use a table (Table 1) and to each possible Historical Project assign the values "yes" or "no."

The results are evident. Of eight possible combinations, only three are real possibilities. Of the three, capitalism doesn't require discussion because it would be incompatible with a real participative democracy. Capitalism works in many types of repressive societies, but is antagonistic to real democracy. Hitherto existing socialism considerably reduced economic exploitation, but not vertical sociopolitical dominance nor alienation, which greatly diminished their democratic attractiveness for advanced societies. The last option, real democracy, represents the defining content of the New Historical Project, the strategic objectives that give it its own identity: a society with neither capitalism nor market, with neither State as instrument of repression nor alienation. To say that these are *strategic* objectives means, that their full realization will only be reached when class society is definitely superceded.

The constituent documents of the Historical Projects have the political (ideological) function of giving the various classes and social actors a new conception of the world; in this case, the conception of the global postbourgeois society. A New Historical Project is, in the main, a method of consciousness raising, one that generates conceptual clarity faced with the dominant mythology. It allows the constitution of the transforming subject. With the result that change in the modern history was always preceded (necessarily) by documents or programmatic manifestos that unified the diverse social forces towards common objectives: the theses of Luther in 1517, the declarations of the Rights of Man in United States (1776) and France (1789), these were programmatic documents of the bourgeoisie; the Communist Manifesto was the flag of the historical socialist movement. The constituent documents of the New Historical Project will fulfill the same function.

2.2. Theoretical bases of Marx's project

The problem for all scientific social theory consists in understanding (and, if it is possible, measuring) the interaction dynamics between the logic of the system and the logic of the social subjects, because the dialectic between both elements and their relative forces determines the concrete evolution of society: its objective possibilities of development and the possibilities for conscious human practice. That dialectic and correlation of forces must now be understood nationally, regionally and globally.

The first scientific theory of the society based on these theoretical premises, was that of Marx and Engels. Previously, Adam Smith had elaborated a systematic theory on the dynamics of capitalist society, based on the national market economy of and formal democracy¹: a cybernetic model - the market as invisible hand - driven by the selfishness of economic agents. The main deficiency in this first approximation to the logic of bourgeois development is that the mediation between the logic of the system and human activity is truncated. In fact, the individual economic subject is no more - nor should it be - any more than a dependent function market logic. Human practice, as a conscious capacity to construct a fair social order doesn't exist, nor does it in contemporary neoliberalism. Marx and Engels were the first to achieve a methodological approach that solves the problem. In this as in so many aspects, the theory of Marx-Engels is superior to any other subsequently developed theory in the social sciences, which in general, continue to be one-sided. They either overstate the influence of the system (the systemic logic), ending in the mechanism or structuralism; or overstate the influence of the subject (individual logic) as in the voluntarism or psychologism. For that reason, the New Project Historical starts off from the first explanatory theory of society.

Marx and Engel's philosophy of praxis begins with the analysis of social behavior in bourgeois society. They sought to understand the poverty of the majority in early capitalism, and their forms of struggle, with the practical purpose of putting an end to the system. Engels explains such a motivation in *The Condition of the Working Class in England* (1844-1845), saying that "A knowledge of proletarian conditions is absolutely necessary to be able to provide solid ground for socialist theories, on the one hand, and for judgments about their right to exist, on the other; and to put an end to all sentimental dreams and fancies pro and con." It was a theoretico-political necessity because socialism and German communism had been born, more than anything, of "theoretical hypothesis" as "almost none of the avowed champions of such reforms arrived at Communism otherwise than by way of the Feuerbachian dissolution of Hegelian speculation". Marx, in turn, advances in the philosophical-economic Manuscripts (Paris, 1844) toward that that he would call later, "society with human character" or the "social humanity" (10^a thesis on Feuerbach). The Hegelian philosophy provides the key theoretical concept: "estrangement" or "alienation." It refers to the difference between what the social subject should be according to the philosophy bourgeois politics - a conscious, ethical and rational entity - and what it is. The structural cause of alienation is the mercantile relationships that dominate the bourgeois society (its character of fetish), but there also exists a deliberate component: manipulation by means of the religions, from the ignorance, from the lack of democratic and cultural participation, from the ideological apparatuses of the system, etc..

The social subjects, as much individual as collective (classes, unions, parties, etc.), show different levels of alienation or deformations from that which - according to their objective situation - it should be their identity or consciousness. Practice, as a means of liberation, has to tear through the forces of alienation and allow

¹Translator. I think you overestimate the role of formal democracy in Smith's writings here. On the other hand I think you underestimate his historical materialism as evidenced in his 'Lectures on Jurisprudence'.

each person to develop according to their potentialities. That emancipatory practice requires, on one hand, of the construction of historical and appropriate class consciousness, guided by a historical program and, on the other hand a collective subject, because it is obvious that, faced with the power of the society and the State, individuals cannot remedy the causes of their alienation. Both tasks were completed in February of 1848 with the appearance of the *Communist Manifesto* which allowed one to know the New Historical Project of the industrial majority, whose transforming kernel was the proletariat. To consider to the proletariat as the only class able to carry out the emancipation, was not some dogmatism or romanticism of Marx and Engels, but a correct conclusion based on a scientific analysis of the class structure of the then contemporary bourgeois society.

If we interpret that subject of change the way Marx and Engels did, their assessment remains valid. Only a class with "radical chains", a class that "it is the breakup of all the classes, a sphere of the society that has an universal character", could achieve the emancipation. The universality of suffering of the proletariat - that includes within it the suffering of all the other oppressed social actors - it generates the universality of their historical project of emancipation.

The detailed analysis of the logic of the system that alienates and destroys the citizen, was developed depth in *Das Kapital*, one decade² after the Manifesto, in the exile in London. In this work, the authors³ understood that the decisive dynamics of the bourgeois system can only be appropriately grasped through the concept of value. Value is for bourgeois society, what the genome is to the human being: the strategic variable that determines the system's evolution and performance possibilities. Differentiated first into use value and exchange value, then into value and surplusvalue, Marx and Engels reveal the secret of bourgeois exploitation. A capitalist buys labour power for fixed days, let us say eight hours; but the value that they need to generate replace the daily wage is produced in a mere fraction of the working day, let us suppose, in six hours. The two remaining hours generate surplus value - that is to say, a surplus over the wage - which is retained by the capitalist.

With this discovery, the two scientists not only reveal the mystery of capitalist exploitation - which was denied by other scholars of their day using the argument, that wages were based on mutual un-coerced consent between worker and employer - but also that of all other class societies: surplus labour that can be expressed in terms of time, as surplus value; in material terms as surplus product or in monetary terms, as profit. The dynamics of human social evolution is determined by social struggles around the appropriation of surplus labour, or their forms of appearance like surplus product or surplus value. While the immediate producers, whose only means of production is their ability to work, try to expand their share in the surplus product, that is to say, to increase their quality of life with better wages or other benefits, if necessary by means of strikes and others forms of militancy; the owners of economic power (feudal lords, slave owners, capitalists) try to cut the share of the direct producers in the economic surplus; if it is necessary, by means of the military repression.

²Translator: should that not be 15 years.

³Translator: do you intend this to be authors or author (Engels never claimed to be more than an editor of the book).

Marx and Engels' momentous discovery puts them at the same level as great natural scientists, such as Newton or Darwin, occurred just before the 1850s. That explains, why the Manifesto begins with the famous sentence, "The history of all hitherto existing society⁴ is the history of class struggles" This is a correct *description* of human social dynamics over the last five thousand years. The actors of this epic fight are revealed, but not the object or prize of the fight, that it is to say surplus labour, surplus product or surplus value. That ultimate causal *explanation* was provided by Marx and Engels after they thoroughly understood the logic of the human evolution during the last five millennia. For a concrete capitalist, the decisive force of surplus value is revealed through the law of value and by the rate of profit. The law of value and the rate of profit are the parameters which define the performance of capitalists and, ultimately, of all classes. These parameters are objective forces for each individual agent in the economy. Whosoever doesn't submit to them is destroyed by them. Their observance is, as with the laws of nature, a precondition of the individual's survival. But like the logic of nature, the logic of the social system can be denied when a community is strong enough to substitute it with another system, as happened in 1917 in the USSR.

The fundamental difference between social and natural systems is that the former are more accessible to human intervention. That is to say, the logic of the system on their members is not carried out in an absolute way, as, for example, in the solar system or in an anthill, but in a form mediated by the cultural software or identity of the social subject. The logic of the system is interpreted by the subject and the quality of this interpretation, together with other concrete conditions, determine if they will execute the system's logic completely, partly or whether they will act against it. Its practice is, therefore, the result of both factors: the system's logic and the person's own logic.

To want to change the logic of the system presupposes, therefore that the subject has or has acquired a cultural software that allows them to understand:

- a) the logic of the system clearly in its main aspects;
- b) their own identity and,
- c) the perspectives of change that are objectively viable.

Marx and Engels dedicated their whole lives to the creation of this class consciousness and of the political/trades-union organization of the workers. They explained and combatted the effect of socialization emanating from industrial labour, on one hand, and on the other hand from the impacts of deliberate ideological deformation arising from the ideological apparatuses of the system: church, school, the means of communication. Overcomming both types of alienation of the subject

⁴That is, all written history. In 1847, the pre-history of society, the social organisation existing previous to recorded history, all but unknown. Since then, August von Haxthausen (1792-1866) discovered common ownership of land in Russia, Georg Ludwig von Maurer proved it to be the social foundation from which all Teutonic races started in history, and, by and by, village communities were found to be, or to have been, the primitive form of society everywhere from India to Ireland. The inner organisation of this primitive communistic society was laid bare, in its typical form, by Lewis Henry Morgan's (1818-1861) crowning discovery of the true nature of the gens and its relation to the tribe. With the dissolution of the primeval communities, society begins to be differentiated into separate and finally antagonistic classes. I have attempted to retrace this dissolution in *The Origin of the Family, Private Property, and the State*, second edition, Stuttgart, 1886. [Engels, 1888 English Edition and 1890 German Edition (with the last sentence omitted)]

was a means; the end consisted in building up the forces, to produce the desired radical change.

2.3. Historical impossibility of the project

However, they failed to make the same progress with the second pole of the problem: the logic of the market economy. They didn't leave a concrete program for a socialist economy, for a simple reason, that neither scientific knowledge nor the advance of the productive forces allowed it. The theory of value that is the essence of Marx and Engels' political economy, had correctly determined, following Ricardo, that the objective value of a product is the mean quantity abstract labour, expended in the production of a commodity. But neither the computers nor the advanced mathematics existed that would have allowed one to practically calculate value of a product. The vital theory of an economy qualitatively different from that of the market, could not become the operative base of a real economy. It is for that reason that all the economies of the socialist countries were based on calculations of monetary units - generally guided by the prices on the world market - and not in units of quantities of abstract work. And, therefore, neither could the exchange of products be carried out in terms of equi-valencies - justness of values -, but in terms of equi-prices - justness of prices.

That objective inability to found the economy of the new society on a qualitatively different base to that of the national market economy, made a quantum leap in the system impossible and allowed the involution of the Soviet Union. Today fortunately, the mathematical/operational problem has been solved through the genius of Arno Peters who will have the historical-scientific merit of having contributed the missing link in the evolutionary chain toward the classless society.

Next the reflections of Peters on this problem:

Did an equivalent economy exist in the communist countries [...] By means of the socialization of the means of production it was possible that, as a command economy, it was able to meet the basic needs of the people. The right to the work was guaranteed as constitutional right. Moderation replaced the insatiability of the market economy. Profit lost its basis with the abolition of the private property in the means of production. The life of each individual had a guaranteed existence and future prospect. Income differentials reduced from a ratio of more than $\frac{1}{1,000,000}$ to a mere $\frac{1}{10}$. [...] All these were enormous historical advances. But can we conclude from this that the communist command economy was already an equivalent one?

There, the prices of products were not equivalent to their value; therefore, they were not determined by the labour time they contained. Wages were not equal to the value that workers had added to the product. It means that the economies in the communist countries were not equivalent. Thus, the exploitation of man by his neighbor [...], had been eradicated only according to Marxist categories, but not in reality. For Marx, exploitation was "the gratuitous appropriation of the product of other people's labour (surplus labour) on the basis of private property in the means of production." But: if exploitation was

a matter of property in the means of production, then, managers, top medical consultants and directors of banks (as non-proprietors of the means of production who only live from the sale of their labor force), would be exploited; on the other hand, peasants and self employed builders, who own their means of production, would not be exploited, and if they used an assistant or waged apprentice, they would be exploiters. In the communist countries, people's exploitation of their neighbors had decreased to the difference in salary levels. It is necessary then to ask, what is the relationship between wages and proportionate value for the worker, that is to say, the time worked?

Eight years after Ricardo's death, John Gray developed labour money theory, proposed by Robert Owen to realize the right to the full product of labour, toward a coherent system: A central bank issues certificates, that are for a man-hour, a working day or a working week and that act as instructions for the payment of products containing the same labour time. This consistent identification of the goods value with the working time each contains derives from the teachings of Ricardo who sought an absolute measure of value in labour time. And it also agrees with Smith's theory who said in his main work: "Equal quantities of labour, at all times and places, may be said to be of equal value to the labourer."⁵

However, 28 years after Gray, Marx rejected the absolutisation of labour time as the measure of the value, because it doesn't allow the product of labour to become a commodity in the sense of the market economy. For a start, Marx contrasted individual labour time with socially necessary labour time, that means, the time: "required to produce an article under the normal conditions of production, and with the average degree of skill and intensity prevalent at the time."⁶ But this already involves a relativization of the time actually worked, which now is no longer an objective direct measure of value. For Marx, human labour is the "expenditure of simple labour-power, i.e., of the labour-power which, on an average, apart from any special development, exists in the organism of every ordinary individual. Simple average labour, it is true, varies in character in different countries and at different times, but in a particular society it is given. Skilled labour counts only as simple labour intensified, or rather, as multiplied simple labour, a given quantity of skilled being considered equal to a greater quantity of simple labour. Experience shows that this reduction is constantly being made. A commodity may be the product of the most skilled labour, but its value, by equating it to the product of simple unskilled labour, represents a definite quantity of the latter labour alone. The different proportions in which different sorts of labour are

⁵Adam Smith *An Inquiry into the Nature And Causes of the Wealth of Nations* 1776 book 1 chapter 5.

⁶Karl Marx, *Capital* vol 1, chapter 1.

reduced to unskilled labour as their standard. are established by a social process that goes on behind the backs of the producers, and, consequently, appear to be fixed by custom."⁷

This way, Marx returns to Ricardo who said in this respect: "In speaking, however, of labour, as being the foundation of all value, and the relative quantity of labour as almost exclusively determining the relative value of commodities, I must not be supposed to be inattentive to the different qualities of labour, and the difficulty of comparing an hour's or a day's labour, in one employment, with the same duration of labour in another. The estimation in which different qualities of labour are held, comes soon to be adjusted in the market with sufficient precision for all practical purposes, and depends much on the comparative skill of the labourer, and intensity of the labour performed. The scale, when once formed, is liable to little variation."⁸

However, this scale is, (as with Marx's, arrived at through a social process), nothing other than the "natural wage" settled on by the market. So Smith, Ricardo and Marx didn't determine the market price of the goods from their values expressed in labour time (or also measured only by it), instead they traced the value of goods back to labour time by taking into account the prevailing market wage rates, and by this policy they openly showed profit and rent to be a residual. A theoretical consequence for the labour theory of value of greater importance was thereby achieved, that it was compatible with the practical survival of the non-equivalent market economy. And this was now updated, in toned down form, also in the Communist planned economies.

Arno Peters, *Das Äquivalenz-prinzip Als Grundlage Der Global-Ökonomie*, page 21..22

2.4. Theoretical stagnation of the socialist project

If one compares the destiny of Marx and Engels's classical socialist theory with the other great paradigms of science, one notices that it failed to undergo a scientific development comparable to that of the paradigms of the physics or biology.

Classical socialist theory (Marx/Engels), classical biological theory (Darwin) and classical physics (Newton), have common origins in the scientific epistemology of the 17th to 19th centuries; however, their subsequent evolution has been very different. While Darwin's models and Newton became foundations of a constantly renovated theoretical physics and biology- one that became deeper and qualitatively more powerful during the 20th century with the development of relativity theory, quantum physics and molecular biology, among others - the same thing did not happen to the work of Marx and Engels.

⁷Karl Marx, *Capital* vol 1, chapter 1, sec 2.

⁸Ricardo, David. *On the Principles of Political Economy and Taxation*. London: John Murray, 1821. [Online] available from <http://www.econlib.org/library/Ricardo/ricP1.html>; accessed 12 January 2007; Internet.

We will illustrate this fact with the evolution of physics⁹. The laws found by Newton explain, in essence, certain mechanical movements of natural systems. When one tries to interpret more complex movements or realities, for example, thermodynamics or electrodynamics, new interpretation paradigms are required. Some of those paradigms or theories were already developed in the 19th century by Maxwell (electro-dynamics) and Boltzman(statistical mechanics), leading. in Einstein's annus mirabilis 1905 to his theories of the relativity, Brownian motion and the quantum; the latter being further developed by Werner Heisenberg and Max Planck going on to Murray Gell-Mann in the theory of the quarks. If one looks for an explanation of this extraordinary advance in theoretical physics- an advance that opened up new dimensions of the reality to objective knowledge and the human domain - the answer is surprising: it is due to a dialectical interaction (or mutual interaction) among: experimental physics, theoretical physics, pure mathematics and logic. It is the constant interaction between empirical knowledge (experiment), synthetic reasoning (theory) and the abstract systems of the pure mathematics and logic that it has allowed the dizzying development of physics, from Newton down to the present day.

Regrettably, the same evolution didn't take place in Marx and Engels's paradigm . Vladimir I. Lenin, Rosa Luxemburg, Antonio Gramsci and other eminent persons dedicated their life to the implementing the classic theory of socialism in practice, making and defending the revolution against capital. In that struggle they contributed important aspects that enriched classical socialist theory: on one hand, because they faced decisive realities that did not yet exist in Marx's day (for example, monopoly capitalism) and, also, because the very practical realization of the paradigm generated realities that demanded new theoretical positions.

However, those inspired contributions forced by the necessities of practice, failed to provide socialist theory with revolutionary new theoretical forces comparable to the new paradigms in physics. What was missing was the complex interdependence which had made possible the big creative models in the sciences. We have, in consequence, kind of a experimental or applied socialism, but no theoretical socialism nor do we have its "mathematics" and pure logic. In the technically and scientifically most advanced pole of the system, the USSR, was further hindered in its creative development by the Stalinist regression. The bigoted counter-revolutionary Stalinist repression of various areas of scientific research, as shown in the debate about the class character of the Chinese revolution, the execution of the maybe greatest economist of his time, Kondratieff, the demonization of cybernetics as bourgeois-ideological deviation, the contempt for genetic research as well as the Moscow show trials and the liquidation of the Kulaks, established a climate of dogmatic-sterile thought in the avant-garde country of the then existing socialism which spread paralysis across all other satellite states. No creative complex interdependence with experimental socialism therefore occurred and the latter solidified into a circular movement, atrophied by the absence of theoretical

⁹The attempt by physics, to find a " theory of everything", therefore a theory, that gives an explanation for the incompatibility of some natural laws, and an uniform representation of the four fundamental forces of physics gravity, electromagnetism, strong and weak nuclear forces, resembles in certain respects the task of the new society theory. Here, it concerns economics, politics, culture and military, the four essential and partially independent subsystems of social reality, that must be placed coherently together within a theory of social structural transformation.

Newton	Darwin	Marx
Classical Physics 17th Century	Classical Biology 19th Century	Classical Socialism 19th Century
↓	↓	↓
Modern Physics	Modern Biology	Modern Socialism
↓	↓	↓
Einstein - relativity	Crick , Watson - DNA	?
Planck - quantum mechanics	Mullis - PCR	?
Heisenberg - uncertainty principle	Various ¹⁰ - Human Genome	?
Gell Mann - quark theory	Wilmut - mamalian cloning	?
		21st Century Socialism
		↓
		Cockshott/Cottrell/Peters - Equivalence Economics, Non-class state Participative Democracy

TABLE 2

socialism, by the lack of the big new synthesis - the designs for 21st century socialism - and the lack of anything corresponding to pure mathematics and logic, the leading sciences of our epoch. In consequence, we lack a socialist theory for the 21st century that can guide the transitional struggle towards a victory of the masses.

In the resigned concept of "actually existing socialism" that was current in the GDR, in the civic expressed wish for the substitution of "actual socialism" by "real socialism" or also in Fidel Castro's apostrophising of Cuban socialism as "hand-made", "handcrafted", one sees once more the reflection of a lost dialectic and bold theoretical future. As a consequence of this odyssey that the scientific foundation socialism has undergone, there was until now no developed socialist theory for the 21st century able to orient struggle for a post capitalist civilisation.

Does this mean that what Marx, Engels, Lenin and other socialists developed, is today obsolete?

That their work can no longer contribute anything?

No, of course not. That would be like saying that Newton is obsolete, because of Einstein.

For certain tasks of the reality, the classic teachings still are valid. If one wants to send a rocket into the space, one uses Newtonian mechanics. Building micro-processor chips however, requires quantum physics. The development of newer and more fundamental explanatory models in science doesn't therefore negate existing models but expands and specifies them; does not destroy existing objective knowledge but enriches it and thereby improves possibilities for revolutionary change.

The teachings great revolutionaries therefore still have validity for certain phenomena of the reality; however, we lack the Einstein, Plancks and Gell-Manns of the theoretical socialism for other phenomena. And scientific socialism is simply the quintessential cybernetic scientific theory. If its essence consists giving

billions of people the maximum historically possible self-determination within a variety of encroaching decisive macro-structures and underlying micro-structures, how could the achievement of this goal be possible be without the most advanced knowledge of the corresponding sciences?

How could you, without complexity theory, for example, answer the basic question as to whether the information logistics of the Federal Republic of Germany, existing in the year 2004, was sufficiently developed to allow a labour value oriented non-capitalist economy to be a central mobilising point of an anti-capitalist political program?

How would one write the protocols for annual electronic plebiscites on the state budget without being up to date with computer science?

And how could one to judge the effects of technological development on unemployment or a suggestion that we develop producers cooperatives as the dominant economic form in the transition to a classless company, unless it were in the framework of a new socialist theory for the 21st. Century?

The relationship between Kepler, Copernicus, Galilei and Newton is not one of antagonism but dialectical evolution. And same goes for Newton and Einstein, Hegel and Marx. There can be no followers without the ideas of predecessors. All build the future. They lacked something, yet they still knew. They constitute a great chain of interaction, one that seems to sometimes stagnate for decades, until it drives on toward the unaccomplished, till the not yet becomes the now. Now once again, history goes on, with the social dialectic, with the New Historic Project for a post-capitalist world society.

CHAPTER 3

The new historical project: Participative Democracy (socialism), 21st century variety

3.1. The planned equivalence economy

The market economy (chrematistic) is unable to appropriately satisfy the socioeconomic and ecological needs of a world of almost seven thousand million people, due to five systematic limitations. In the first place, it is an unstable system, because it lacks a mechanism of macrosocial coordination of its strategic variables (investment and consumption). That "anarchy of capitalist production" (Marx) that is to say, the contradiction between the social character of production and its private appropriation, make recurrent system crises unavoidable. In second place, it is an asymmetric system, that is to say, with chrematistic there inevitably takes place a concentration and centralization of capital and of social wealth, in few hands; and the correctives aspects of bourgeois political democracy lack the force needed to prevent this. In third place, the evolutionary logic of the global economy is mercantile-nationalist. The dynamic elements in it are in general the transnational companies that are, the property of the economic elites of their originating country and which require the politico-military protection of their National States to carry out their global functions. In fourth place, the transnationals exclude, not only other companies, but above all, citizens of global society who have no control over their decisions. This antidemocratic character explains, why the end results of the world economy do not correspond with the needs of the world's population. Lastly, the current model's universalization at a First World level of consumption is ecologically impossible. However, the global elites have no rational alternative to offer the masses; they cannot abandon chrematistic and return to economy in its original sense.

A transition is presently taking place from mechanical, electrical human productive forces to a new generation of cybernetic production technology, the so called third industrial revolution, automated digital production.

As Hanns Eisler, musical co-worker of Bertolt Brecht and composer of the national anthem of the GDR, in the seventies conversed with the playwright Hanns Bunge about cybernetics, he pronounced the transcendence of the new development in following words: "with it not only begins, as one says, the third industrial Revolution but something more. An unforeseen Capital in mankind's history begins. We have only the presentiments, of what is to come". Arno Peters, who was a close friend of by the essential founder of computing science, Konrad Zuse, remembers, that his dialogues with Zuse also strengthened him in the conviction,

that a "new epoch of the world history" dawned, that of 21st century Socialism, that he called "computer socialism"¹.

The interpretations of Eisler and of Peters were correct. The capitalist revolutionisation of the productive forces has created its own functional working environment in free trade, privatisation and its own neoliberal state, inspired by Mises' theories and their political incarnation in Ronald Reagan and Maggy Thatcher. One can draw two conclusions from this:

- (1) not only revolutionary theories turn into the material forces once they seize the masses, as Marx said in one of his brilliant formulations, but the same effect appears when a reactionary theory seizes the elite.
- (2) that the new world epoch and the achievement of socialism must pass through a phase of intensified class struggle that already expresses itself economically, in the intensification of absolute surplus value production and growing unemployment, and politically in the fascisation of state apparatuses.

These manifestaion of bourgeois structural crisis, which are generally represented in bourgeois propaganda as consequences of some autonomous globalization for non-innovative states, are the result of something Marx called the *real subordination* of the world to capital. The transcendental political-economic meaning of this real subsumption, contrasted with a merely *formal subordination* to the world market in the 16th Century, lies in its influence on investment ratio. The national investment ratio, that is the share of national income that is saved rather than consumed, and its material structure is crucial for three factors, upon which, in essence, the social peace and political stability of modern national/regional states depends:

- (1) the rate of growth of GNP,
- (2) the wage levels of the population,
- (3) the rate of unemployment.

Whoever determines investment decisions, simulataneously determines, at the level objectively possibilities, the level of the class and distributive struggles in a society. The control of this strategic variable has,for some 200 years, been in the hands of capital which, across all fronts - from military dictatorship, through the substitution of living labour by technology, to labour legislation - struggles therefore to get absolute control over its application. The real subordination of the planet to capital through new production technologies and trade liberalizations, brings a huge step closer the capitalists dream of being freed at last from the national forces of formal democracy and the organized workers movement. This comes however at the cost of setting free two potentially system-endangering tendencies.

The constantly increasing area-temporal mobility of productive and merchant capital, together with the almost complete international freedom of movement for money capital, inevitably means that vari able capital² is traded to an average price world-wide; therefore the wage level of first world workers tends to adjust down towards that of third-world workers. Those branches of production that can not,

¹Arno Peters, Computer Sozialismus. Gespräche mit Konrad Zuse, Verlag Neues Leben, Berlin 2000.

²*Translator* The term Marx used to refer to capital expended on wages. It is here used metaphorically to refer to labour power.

do not want to, take part this reduction on third-world standards, for example by moving abroad or "outsourcing", are liquidated by the law of value, or what is the same thing, by their uncompetitiveness; their employees end up with Hartz IV³. This process is not restricted to factory work but increasingly extends on middle level activities, for instance medical technicians, EDP and bank staff. This process whereby labour diffuses from high to low concentrations applies to the world economy, it cannot be prevented in the medium term by any European welfare measures, no Keynesian remedy can immunise even the world-biggest exporter, the Federal Republic of Germany, against it. It is as impossible to resist another systematic tendency, the concentration of power and wealth in the first world, whose dynamics goes just as one-sidedly to the higher from the lower concentration.

This tendency towards impoverishment is intensified by the constant rises in the productivity due to new technologies, that always require less living labour. However, this time, unlike the past, there is no rescuing "sector 4" in sight that will absorb displaced labour⁴. The problem can therefore not be solved within the system economically by shifting workers between branches but only politically. This results from the character of cybernetic production technology, that represents a so called cross-section or transversal technology, which rationalizes all activities from the primary to the secondary as far as to the tertiary sectors and thereby frees up labour power. The historic division of the production into labor-intensive and capital-intensive areas is also involved by this tendency. The displacement of labor-intensive activities to cheap wage countries will find an objective barrier in the future when technology will be cheaper than the cheapest worker.

Bourgeois neo-classical economics assumes that productivity-induced unemployment causes wages generally to fall, that the use of new manpower becomes once again cheaper than the installation of new technologies at a certain point, and the employment problems caused by increased productivity are thus solved. However, this tendency has, through the third industrial revolution, finally been broken. The U.S. company Alliance Capital Management showed a dramatic connection between productivity increase and annihilation of factory jobs in a empirical world-wide industry study, including China. They found that employment fell in every year and each region of the earth, between 1995 and 2002, by 16 percent, although productivity increased by 4.3 percent and total industrial production grew by 30 percent.

Some forecasts show that of the 163 million jobs in industry today, in the year 2040 only a few million will be needed and that the industrial world will be able to

³*Translator.* The Hartz IV was a "reform" of unemployment pay introduced in Germany in 2004.

Full unemployment benefit (Unemployment Benefit 1) was reduced from 32 months to 12 months after which claimants were put on a much lower level of benefit (Unemployment Benefit 2).

Whether or not a claimant was eligible Unemployment Benefit 2 became means tested, life insurance and the income of husband or wife were taken into account: only when these reserves are used up will a claimant get money from the state. The Institute for Economic Research in Halle estimated that the average long-term unemployed person would receive approximately 350 euros per month compared to 530 before the reform.

In order to receive even this reduced benefit, the unemployed can now be forced to accept any legal job, even if the pay does not provide subsistence and no matter how advanced their (previous) professional training.

⁴The reference here is to the way labour has been successively displaced from agriculture (sector 1) to manufacturing (sector 2) and then to services (sector 3).

operate with about only five percent of the adult population by the year 2050. This figure may appear exaggerated, it becomes however more realistic if one considers that the entire US agricultural sector is driven by only approximately 2 percent of the economically active population today.

That reduction of necessary working time caused by technically conditioned rises in productivity, which in a capitalistic market economy inevitably results in the scourge of the unemployment, would in equivalence economy be turned into a positive factor. Economic democracy requires citizens with time to spare, as well as citizens with the elementary economic knowledge and training which allow participation in planning and supervising different levels of the system, from the enterprise level up to community, nation and region and ultimately, world economy. Lenin had quantified the relationship of "physical labour" and participation for the management of the state in March 1918 as follows: "six hours daily physical labour, for each adult citizen and four hours of work on state administration "... At present levels of productivity, the necessary physical and intellectual work will doubtless need only a fraction of the labour power and labour time of future working populations of and will anyway be much less than Lenin's six hours. A post-capitalistic economic order is only becomes possible if necessary labour time is reduced .

Despite the structural deficiencies and contradictions of the market economy mentioned above, the global elites have no rational economic alternative at their disposal; they cannot leave Chrematistik and return to political economy, without making themselves redundant as a class. Their *raison d'être*, the daily subordination of the population to capital expansion, is irreconcilable with any genuinely democratic, socially just, economically and ecologically developing world society.

To summarize, in classical terminology, the structural unviability of national market economy: the law of the value, implemented by the dominant national elites , is incompatible with a democratic, equal and sustainable global society. This type of economy, with unstable anti-democratic coordination and subordinated to "the market", shall be democratically replaced by planned economy.

To say that the new equivalence economy is planned, should not scare us. There has never in history been an un-planned economy. Humanity doesn't have to chose between for or against planning their system of material reproduction; only between different types of planning and different human groups doing the planning. In hithertoo existing socialism, planning was the task of thousands of officials and specialists, belonging to the State and Party; in global capitalism there are thousands of big transnational capitalists and professional political officials. In neither case, is real democratic control exercised by people over decisions that affect their material lives: neither the direct producers nor the citizens in general have such control. Company investment plans, like the State budget, are something beyond popular sovereignty. This is an anachronism, because the internet, already allows us to extend Participative Democracy to the economic sphere. It is again Arno Peters is who has enlightened us about returning to an equivalent economy based on the logic of use value:

The capitalist like the Communist countries, [...] can only carry out the historic return to equivalent economics on a higher level, by combining the labour theor of value with the equivalence principle.

Labour time alone can then determine wages, that means the wage for work done is the same, independent of age, sex, marital status, skin color, citizenship, the nature of the work, of physical effort, of background, of demand, skill, experience, personal dedication, independent also of the weight of the work and health risks - in short: The wage corresponds directly and absolutely to time worked. Prices correspond to values, and they contain nothing other than the full value of the work embodied in goods.

The economic cycle locks into values instead of prices. The exploitation of people by their fellows (= acquisition of other's labour products that exceed the value of one's own work) is over, each human being gets the full value, they put into goods or services.

Remuneration of services based on working time, this simple, clear process, is in itself, the foundation of the transformed economy but has certain prerequisites: All human activities, that go beyond the individual self-sufficiency, must be included into the labour theory of value. This relates to activities that are today called "services": for example the work of doctors, judges, nurses, typists, mailcarriers, lawyers, teachers, foremen, drivers, directors, sweepers, cooks, ministers, hairdressers, journalists, printers - in short: all activities, whose results are not directly integrated into goods.

When we have worked out the embodied labour time and, in consequence, the value of every good, we will be able to reduce them to a common denominator with services using embodied time. This commensurability of services with productive labour, that one can only achieve deriving both from an objective, absolute measure of value (taken from the Labour Theory of Value), subordinates the whole economy to uniform principle, and their circuits can close on an equivalent basis: a base that always begins with the individual and ends with them; a base that in the era of the global economy - that it resides in the condition that each human being has the same category, the same value and the same rights - it includes all individual, independently of the activity type that carry out.

Also activities that today still have as their goal, personal enrichment, have to be included, to the extent that the economy needs them. In this context, trade is limited to the distribution of the goods, their transport and storage; these activities, actions necessary in a world with a division of labour, contribute to value and have thus to be remunerated like any other work: according to time worked. Similar norms should to be applied the owners of companies that don't engage in trade, but in production. After their profits disappear, their managerial activity - that contributes like any other work to the value of goods - this should be paid at an equivalent rate, so long as the economy

retains a hierarchical structure and, thus, still has a 'military' organization that requires their activity. At the present time, this is the situation in almost all countries.

It is more difficult, to regulate materialized or accumulated labour. With the socialization of the means of production, a percentage of the value of any new good, would accrue to the community, represented by the State, who are forced to renovate and to modernize the means of production. So long as the means of production remain private property, the value share flowing in from concretized work to goods could stay a component of the entrepreneur's income. Bound up with the obligation of full reinvestment, here some structural elements of the non-equivalent economy could be conserved in the transition to the equivalent economy. Land and natural resources would be transformed into common property, just as it was the case during most of the period of the equivalent local economy. But unlike in those days, when they were unrestrictedly available to everybody, like air and water, they would instead be treated as a very valuable asset controlled by the State whose conservation and future use should be the priority of the whole humanity rather than any private interest.

To be able to assure the right to the housing and room for all, the community organized in the State, has to regulate the use of land and buildings according to general need. All the public activities that don't create values (as the education, the medical care, the forecast for the retirement, the jurisprudence, the administration) could be paid by means of the taxes proportional to time worked. The comparison of the works of the production with the benefit of services, suggests the use of the same name for both activities, the word "performance" (*Leistung*) suggests itself. In this way, the whole course of the economy is reduced to individual efforts to satisfy the general need in the best possible way. The equivalence principle is carried out in all the levels by means of the equivalence between effort and compensation (*Gegenleistung*).

The transition toward the equivalent economy is facilitated and activated by the rapid computerization of economy, administration and private life, since the interconnection of production, distribution, consumption and the use of services can be guaranteed by means of the computer: estimation of needs world wide (including the relative ordering of these needs), steering of production (including the construction of new production facilities), and the distribution of the goods and services, could be managed by computers just as they are now. The inventor of the computer, the professor Konrad Zuse, called this economic order "online-socialism", when it combines the equivalence principle with the labour theory of value.

The accumulation of the wealth at one pole and the accumulation of the poverty at another, are processes that depend on one another, which is why they only can be solved jointly. If all the goods in the world were exchanged on the basis of the labour time they contain (time such that they would only have to be paid seven thousand three hundred sacks of coffee per locomotive; that is to say, however many the workers in Brazil harvest during the time that is required to build one locomotive), this new relationship between the prices of natural products and industrial products, would bring about the necessary equality of economic rights between peoples. Overconsumption in industrialized countries would end along with hunger in the developing ones.

This raising of the standard of life of the poor peoples of the world, at the expense of the rich peoples of Europe, North America and Japan; their equal participation in the fruits of modern technology, as would be achieved with the world realization of the equivalence principle, follows necessarily from the recognition of the principle that all peoples have equal rights. [...] However, because the century long colonial exploitation of ninety percent of the world, by our continent, has been the real foundation of European-American industrialization, the idea suggests itself of not applying the principle of exchange in proportion to labour time during a period of transition to the equivalent exchange goods in the era of the global economy, but instead of treating it as the common property of humanity, without application of value, like land, mineral wealth and natural resources. This would represent a historical restitution for the exploitation that the non-European peoples suffered on the part of the dominant European peoples, since it is no coincidence that the modern industry took off in a Great Britain which had based its wealth on the sale of millions of Africans to North America and later expanded its colonial empire to a quarter of the world. This way, historically, the European industrialized countries are only trustees of an industrialization achieved by all the peoples of the world, under immense sacrifices; and with non-equivalent exchange they continue, each day, to trick the non-European peoples out of their historic share of this still growing wealth.

And we have to consider this: the non-industrialized countries of this world are not underdeveloped, they were only developed differently from the industrialized countries. For this reason, they are today less technically efficient. [...] The industrialization that all the countries of the world seek by all means available ..., it is ecologically unjustifiable and, in many countries it would be unnecessary, if their existence could be secured without industrialization to current world levels.

In this way you could achieve a natural division of labour between the States that would no longer be in competition with one another. Thus the ever more violent revolutions of our century would lose their necessity. Any revolution has as its objective an improvement in the situation of the poor, that is to say, basically the equivalence principle. If revolution just substitutes one non-equivalent economy with another, then it fails. In this sense, all revolutions so far have failed. From 1917 there began a series of revolutions that, in principle, were different from all the ones that preceded them: they were successful because they achieved an approach to equivalence. However, the communist countries should not have stopped in the abolition of the private property of the means of production. They had to carry out the exchange of goods based on their real value (the sum of the labour time they contain), and they had to only pay according to the amount of time individually worked; this means that their economies had to become equivalent. But no single small nation could do this, if the rest of the world didn't follow, because, in the end, the equivalence principle can be realized only globally.

In the era of global economy, the equivalence principle enables humanity to establish a relationship with nature no longer based on domination and exploitation. [...] Our non-equivalent economy, guided only by profit, already consumes twice the resources nature can regenerate. This unlimited abuse, at the cost of generations yet to come, could lead to the extinction of humanity in the not too distant future.

The development and application of the objective, absolute value metric, will not immediately bring in the era of equivalent economy. However, it can promote the approach of prices and wages towards values, and thus a gradual change of the economy in the direction of equivalence. When one thinks that the world's transition from equivalent economy to non-equivalent economy was a millennial process, then, this gives great historical importance to the most minimal changes towards equivalent economy.⁵

In a series of interviews, Peters clarified additional aspects of the new economic system.

- *If material incentives no longer exist for incomes, would this not lead to a fall in productivity?*

- The equivalent economy provides a real stimulus to activity from the point of view of the inputs, since each individual increases their right to get goods and services by means of their own actions. And since they will only be able to increase it this way, the incentive to work will be greater than in the non-equivalent economy, a system in which a right to obtain goods and services doesn't depend on one's own activity in their production.

You write in your book, "Das Äquivalenzprinzip als Grundlage der Globalökonomie", that the world-wide investigation of the demand, the steering of the production and the

⁵Arno Peters, op.cit., pp. 91.

distribution of goods would be managed by computer. How would this planning look in concrete terms?

A world-wide organization of the style of the UN or the FAO?

- Investigation of demand is dependent on the development of computer technology and its general availability. It will therefore differ between regions but the goal is the fastest possible recording of individual need. Each individual region has its own recording center and first tests if it is possible to satisfy demand from its own production facilities. If this is not possible, national production facilities get used. For demand studies, production facilities and distribution this will give the smallest regional planning institutions (like communes), above it bigger regions (like districts), even bigger regions (like states) and biggest regions, analogous to federations or continental unions. Above this cybernetic network stands the central planning institution, that covers the whole world.

- With your proposal are commodity relationships eliminated, or would products continue be commodities?

- Commodities are goods dedicated for sale, this means that they arrived on the world with the emergence of trade, and that they will disappear with its end (end of the market economy). Then (in the equivalent economy), goods will only take place to meet needs, and will be consumed by the producer, or will be exchanged at the same value (based on the economic distribution of equivalents).

- Why is education classified as an activity that doesn't create value?

- In the first place, the education is the harmonious development of all of a person's mental capacities and their character, in the direction humanity's ideals. To the development of these special mental and physical aptitudes belong the activities of teaching and learning. In the division of labour, the process of learning is a precondition of activity that creates value; this is why it cannot count among value creating activities; teaching, at all the levels, is labour that creates values: part of services.

- Is your suggestion a continuation of Marx/Engels' project?

- The thoughts of Marx and Engels entered into equivalent economics, just as those of other philosophers, historians, economists and sociologists of the last five millennia.

- What is value creating activity?

- An activity that creates value is any activity that satisfies own's vital needs or other people's, this means that it includes, apart from the production of goods, activities that are today categorised as "services."

- Seemingly, the form of ownership of the means of production doesn't have any great importance for the realization of the equivalence principle?

- This is correct for the first phase of transition towards equivalent economy. With the qualification that, in so far as equivalent economy conquers market economy, profit will disappear and the private ownership of the means of production will lose its basis, it will eliminate itself.

- If the value of products can be defined in terms of quantities of labour, what advantage would there be in defining it in money terms?

- In principle, it doesn't matter in what unit we define the value of the goods and services in equivalent economy, the method can be determined by means of the practical conditions then pertaining. The important thing is that the value of all the goods and services only express the sum of embodied labour.

- *The wage would be paid by means of a credit card, from which would be discounted values of goods that the worker buys?*

- If the wages and prices are compensated in form of metal coins, printed paper or by means of some digital accounting processes, it does not, in principle, matter in the equivalent economy; this will be determined by the pertaining technical situation.

- *What role does the market have?*

- In the equivalent economy there will no longer be a market, because

- (1) the price won't be set by supply and the demand, but the value of the produced goods and of the wage;
- (2) storage, transport and distribution of produced goods will become services whose value, like the value of all the services, will be equal at the labour time expended, and this way, it will be part of the value of the distributed goods.

- *You wrote five years ago that equivalent exchange presupposes the existence of an objective measure of the value (Wertmass) and that this measure didn't yet exist. Why it is so difficult to find it, if it's theoretical basis was already described in the theory of the value of classical political economy*

- The discovery, the concept, that only the labour embodied in a product constituted its true value, could indeed be elaborated two hundred years ago. However there is a great distance between this discovery and the development of a matrix that you can apply to calculate these values in the whole economy. There are no useful antecedent works and, for this, the objective measurement of value, as with the discovery and description of the equivalence principle, it has, of necessity, to be elaborated *ab ovo*.

- *How do you explain the fact that the creators of the theory of the value did not undertake this task, in spite of the fact that without this measure of value, the theory of the value was as mere theory without practical utility for a rational ordering of the economy*

- Adam Smith and David Ricardo were convinced by the market economy, one in which prices of products (independently of their values) are determined by the relationship between supply and demand. Since value is not important for a market economy, there was no reason to analyse the value of individual products. Only in an equivalence economy that rests on the complete coincidence (identity) of price and value, do we absolutely require in order to measure value, the matrix, with which we can calculate the value of any product.

- *Will the measure of value be expressed in a very complicated matrix*

- No. This matrix must be understandable by people in general and easy to apply. And for this, it is necessary to make the complex ones and difficult to measure parts of the value of products compatible with a simple matrix, common to them all. Also, an economy based on the equivalence principle demands the completely synchronized movement of all values in the global economic circuit. This is what makes this matrix so difficult to elaborate.

- *Continuously, for millions of products prices are being calculated, prices that change rapidly. Given that the process of calculating prices is quick and easy; why is it so difficult to calculate the value of these products?*

- In a market economy prices are based on supply and demand, that is to say, without a proper calculation of price. As soon as the determination of the price rests on a calculation of costs, it is based exclusively on prices, not value. In this

sense, the salesperson starts from the costs of production, raw materials and related matters ; that is to say, their prices, not of their values. He adds to these operating costs, which includes labour at its price (wages) and not its value, and also the expected profits. The resulting price is what he tries to get in the market. But this is only feasible if he stays within the range of prices of competing products. The determination of the price it is, in the end, a complicated, ever changing, process that doesn't have anything to do with the determination of products' values.

- *However, in the most widely used German dictionary, price is already defined as "the value of a product expressed in money."*

- If this statement (that you could read up to 1989 in an almost identical way in humanityals and the encyclopedias of the RDA) it was correct, then the equivalence principle would be carried out and the economy of satisfaction of necessities (Bedarfsdeckungswirtschaft) it had substituted to the market economy. But, in fact, we are inside the horrible last phase of the market economy that is characterized by the every time bigger abyss between price and value. The

I price that is formed in the market he/she doesn't have, therefore, any relationship with the value that is independent of the market.

- Then, the prices cannot help him in their search of the values. In what categories will their womb of values be based

- Exclusively in the quantity of work. The value of a product, in which you/they incorporate six working hours, it is double the value of a product that contains three working hours.

- This seems simple. Why, then, he/she needs years to only integrate the bases mathematics of this calculation in a womb that would be accessible and governable for all Because its intention is not to determine the value of each particular product, it works that, surely, the capacity of any individual person's work would transcend.

- It is this way. It seems relatively simple to elaborate a womb that was usable for the determination of the values of the products that is supposed, is of few and easily discernible labor steps. For example, 50 kg of potatoes: if the peasant has harvested 240 000 kg of potatoes in their field of 10 has, and it subtracts 30 000 kg, of the taken potato seeds of the crop previous, then their 50 kgs contain the 1/4200 part of the time of work that used for the production of 210 000 kg.

Everything begins with the cultivation of the earth (to plow and to fertilize) = 90 hr. To pass the tier = 10 hr. The plantation of potato's seeds = 30 hr. The use of herbicides = 5 hr. Three weeks later attention to you furrow them = 10 hr. At the same time insecticide is used = 2 hr; both works have that to repeat on the average once again = 12 hr. Four to five months later the crop: two peasants to 80 hr = 160 hr. The transport of the crop to the casa/almacén = 15 hr. To draw those potatoes and to place them in sacks: four peasants to 50 hr. = 200 hr. Finally the delivery to the salesperson or the cooperative = 50 hr. In total 594 hr. = 35 640 minutes, divided by 4200 = 8.5 minutes. This it would be the value of these 50 kgs of potatoes, if it didn't contain other works (you value). Nevertheless, there is one series of other factors that participate somehow in the constitution of the value of our 50 kg of potatoes. The peasant has used a tractor to plow, to fertilize, to plant, to distribute insecticides and herbicides, etc.. Of the value of the tractor that exists also independently of their price, the corresponding parts enter in the value

of the 50 Kgs But the same value of the tractor is constituted by fractions of the times of employees' work, workers and technicians of the factory of tractors and of all their companies suministradoras, for example, of the production of those materials and their transport; a part of the time of work for the production of the tools and used machines; a part of the time of work employee in the generation of the energy consumed in the production of the tractor; a part of the time of work employee in the construction of the building of the factory of tractors and of all the materials used in it; a time of work for the transport of the tractors finished toward their agency distribuidora; the one time of necessary work for the construction and the maintenance of that distribution agency, where the peasant acquired his tractor. And all this also for the two tows of their tractor, to the one the same as for the machine cropper and the machine to draw that leased for a short term to the cooperative (for what the quantity of time of work embodied in these apparatuses enters in one much smaller measure to our 50 kgs of potatoes).

In all these calculations of values you can appeal to methods to calculate paying-offs that they have shown their utility in the calculations of prices. But also the fertilizer generation natural used by the peasant, it demanded time of work that is incorporated in our 50 kgs of potatoes. The synthetic fertilizer that used was produced in a chemical factory and the 80 kgs of this fertilizer, used for 10 o'clock has., they represent a part of the value of these potatoes. This value you it determines in relation to the time of this small quantity in front of the time that was necessary for the total production in this chemical factory in a certain time, and in this calculation, to the equal that that of the constitution of the value of the tractor, hundred of factors enter, from the generation of the matter prevails in ultramarine countries until the value of the transport (that is of the value of the ship, of their expectation of life, of their energy consumption, of the time of work of their company, etc.), all this like relative part to the 80 kgs of synthetic fertilizer that he/she entered partially in our 50 kg of potatoes.

Many other factors are part of this. If the peasant used work clothes, he has that to be determined their value, besides the time of sewing, to knit and to spin, the matters cousins of the factories textile they have entered with their respective times of work, the same as the times of work for the sack that contains the potatoes. For the 800 kgs of insecticide that equally and in form partially you they have incorporated in the value of our 50 kgs of potatoes; one has to determine in the same way complicated as in the case of the synthetic fertilizer, the parts of these days that correspond to the 800 kgs or respectively 1200 kg. Since the peasant has to use each third at least year potato-seed different to the own one, also has to be integrated the time of work for the one

I develop biological of the potato in the value of our 50 kgs. - If the calculation in a case as 50 kg of potatoes requires an extraordinary quantity of data and complicated calculations, how it can be sure that will find the womb with whose help can to achieve what had not even been to make from the discovery of the theory of the value of tentative way

- On the base of my results obtained up to now I am optimistic. Because you have that to take into account that here I carried out the calculation of the value of my 50 kgs of potatoes from zero. But those products are limited in their quantity and if it had been calculated the value of a previously tractor, of a kg of synthetic

fertilizer, of the clothes to work, of a sack, then the calculation of the one value of our 50 kgs of potatoes would be much easier.

- But it is not necessary to already add to the factors of the value mentioned, others as: earth, capital and gain

- No. Those factors are reminiscences of the time of the market economy that you/they only can be part of the price, but that they don't have space in the value of the products. They won't be present in the equivalent economy and they will increase during the period of transition like parts of the price the difference between value and price.

- At the end of the time of the mercantile economy, is the price bigger than the value

- In general terms and as for the world economy as entirety, yes. Because the base and the fundamental dynamics of the mercantile economy consists on the desire of making earnings. And the gain is not another thing that the difference between the value and the price. However, since the formation of the prices in the world market doesn't only depend on the demand and offer, but also of the power of market of the rich countries, seizures, restrictions, rates aduaneras, subsidies, etc., those earnings move evidently more and more toward the rich countries. Without I levy, accurately we will be able to say this, when the values of all the generated products in the world they have been calculated and compared.

- In what measure, the historical realization of the economy of equivalent requires of the the poor's deliberate intervention and exploited, from political movements until processes revolutionaries, that is to say: this path of the history is unavoidable, i.e., independent of the does it make aware and disposition of fight of the oppressed ones

- The transition from the market economy toward the economy of satisfaction of necessities it is a historically conditioned and unstoppable process that is already being carried out. The conscience public it is part of this process, the same as the political will, the organizational unification of those poor and those that lack rights, including their revolutionary acts.

- In the time of the complete equivalence of the economy it will be even necessary to calculate those value of all the products, when the price will no longer be another thing that the value of a product expressed in money

Yes, the calculation of the value, on which will rest the whole economy then, including those wages and prices, it will exist, but I don't eat an independent calculation of prices of that. Until here the comments of Peters.

A socialist economy should be fair, democratic and efficient. To achieve the justice they have you treaty historically two roads: the redistribution of the wealth, via the State (socialdemocracia, ECLAC, keynesianismo) and the estatización of them means of production (historical socialism). The new economy offers a third strategy by means of the equivalent exchange in products and services.

The precondition for the new strategy is the knowledge of the objective value of the products and services. The bourgeois economists sustain that there is not such a value (I price) objective because those prices are determined by the relationship among offer and it demands and the subjective preferences of buyers and salespersons. And if there are not objective values, it cannot have exchange of values objectively fair (you equal or equivalent). Therefore, the freely agreed prices, for example, of humanity power, they are the only mechanism of possible

social justice, in the economy. This argument mistificador has received a mortal blow for the German mathematician's works Carsten Stahmer. The calculations of Stahmer on fifty eight areas of production of the economy of the RFA (1990), carried out in work values on the base of monetary charts of the German government's input-product, they show the operative-mathematical viability of the new one economy. In later contributions, the author also achieved the objective appraisal of the work in the services (for example in the education and the formation of "human capital") and in entities relative to the environment. That is to say, we already have scales of monetary mensuration of those products (prices), of values (invested time) and of physical volumes (tons, etc.) that are commensurable to each other. This advance is a decisive step toward an unitary operative base of the economy and it is of particular importance for the transition phase that we live.

3.2. direct democracy

The big contributions to the philosophy and science of the formal democracy (bourgeois) they date of those XVII and XVIII centuries and they are linked to the names of Hobbes, Locke, Rousseau, Montesquieu and Jefferson, among others. In the two following centuries (XIX and XX) there have not been taxes comparable. The reason of this stagnation is the relationships of capitalist exploitation that make impossible that the formal democracy gives the qualitative jump toward the Participative Democracy. The Participative Democracy like new quality of the citizens' peaceful coexistence, should to be meditated, for ende, from four points of view: a) The structural impossibility of the citizen's real participation inside the parliamentary democracy; b) the multiple contents and mechanisms of the democracy real participativa, practiced by the humanity during all their history; c) the lack of development of the formal democracy and participativa in the socialism actually existing and, d) the contribution of the advanced sciences to the democratic future.

From a systemic point of view, the property "democracy" it works as mechanism of adaptation to the constant processes of change that operate inside and outside of the SDCH. When following the one social system their evolutionary direction, of the simple thing to the complex thing, their property "democracy" you it develops correspondingly, and he/she acquires every time bigger capacity adaptativa for the survival. In this sense, the appearance of the European national State (absolute monarchy) in the one XV century, or of the modern democracy starting from the XVIII century, they are not casual phenomena; they respond from necessity to certain grades of development of the internal components of the one system (you force productive, demographic density, urbanization, social classes, means of communication, etc.) and to the interaction with their natural and social environment.

The democracy appears, for ende, I don't only eat something positive and ethically superior to forms more primitive of sociopolitical organization, but - as long as necessary consequence of the historical evolution of the human society - functionally superior in their capacity of adaptation to the constant change of the environment of the society and global nature. Such a coincidence among the ethical thing and, to big features, the practical-functional of the democratic behavior of a system sociopolitical contemporary confirms that the big flags of fight politics

of the century XXI they can only be the Participative Democracy and the social justice.

The democracy like a property (characteristic) of the social systems it can be conceived in three dimensions: 1. The social one, expert as the quality of material life; 2. The formal, defined as the set of certain general rules of powers, rights and obligations of those diverse entities that compose the system; 3. The participativa, expert as the real decision of the momentous public matters on the part of the majorities of the society, with the due one protection of the minorities. In the language of the natural sciences we could understand the three dimensions like magnitudes that characterize the property "democracy." In the modern society, the three dimensions have a hierarchical order: the third presuppose the existence of second o'clock and the second of a first one. However, the relationship among three o'clock dimensions are dynamic and interactive: each one impacts on the other ones. The democracy level reached in each historical moment in a complex social system (SDCH), it can be measured in quantitative terms in the three dimensions or magnitudes, made for the one which the discussion of "the democracy" he/she leaves the field of the qualitative science and of the philosophy politics, to be able to be approached by the science. The mensuration of the grades or magnitudes of democracy can be carried out in the subject 's more important social relationships, that is to say: 1. The economic, political, cultural and military; 2. in the main institutions of the SDCH and 3. in the levels micro, meso and macro of the society.

In this sense, the grade of democracy of any country can be investigated with reasonable accuracy, being obtained a respective scale for all the States of the global society. This it climbs it would be formed in an end by the Participative Democracy and in the other one, for the dictatorship, giving place to a distribution of the existent SDCH among those ends. It is obvious that in the present time any country a democracy can be considered real-participativa; that in the range of the formal democracies would hardly have around thirty States and in the social democracy the one same number.

On this base of empiric information of democracy in each country, it can be determined also the grade of realizable democracy inside the objective conditions of evolution current. That is to say, you can calculate with reasonable error margins the grade of oppression or antidemocracia anachronic - outside of their historical time - in this systems. The precise knowledge of the quality of the citizens' life in the different ones "neighborhoods" of the global village, doesn't face another obstacle that is not the lack of political will of the elites world. For the new society, such a diagnosis will be indispensable to use the resources natural and social of the global system, in a program of quick reduction of the abysmal one inequality in the level of the citizens' of the different regions material life and countries. The grade of formal democracy in a social system can be evaluated in terms of the existence and the effective operation of the following institutions, understood by the political liberalism bourgeois as constituent: 1. The division of powers (Montesquieu); 2. The constitution (Letter Great), with a clear formal-democratic definition of the powers, rights and obligations of those collective entities and singular of the nation, the recognition to the sovereignty of the town like only source of genuineness of the state authorities and, consequently, the right to the tiranicidio; 3. A formal-democratic system of the political representatives' of the nation election,

from the one municipal level until the federal one, mediatized by political parties; 4. The parliament like representative of the sovereignty of the popular power; 5. A federative structure of the State; 6. The existence of media that you/they are not property of the State; 7. The free access a/y usufruct of the private property and the protection of the same one; 8. The right State, including the protection of minorities; 9. The constituent dicotomía between the private sphere and the public sphere. These formal mechanisms have suffered in the reality an involución or neutralization for part of the dominant elites that degrade them to simple theorems declamatorios. For the society postburguesa is required its amplification and profundización like indispensable part of a handling democratic of the power in the political and civil society.

The concept "Participative Democracy" he/she refers to the real capacity of most citizen of to decide on the main public matters of the nation. In this sense it is one qualitative amplification of the formal democracy, in which the only power of political decision resides in the periodic vote for political party-characters. In the Participative Democracy, happiness capacity won't be of the situation and sole right of the political sphere, but permanent and extensive to all the spheres of the social life, from the factories and the barracks until the universities and means of communication. It is the end of the representative democracy - in fact substitute - and its superación for the direct democracy or plebiscitaria. The parliament and the electoral system of the partidocracia, as we know them today, they are controlled by the economic elites and they won't have place in the future democracy. The same thing is valid for the monopolies of the adoctrinación (television, radio and it presses) and of the production. The great private company - that in terms organizational it is a private tyranny with military structure - it is incompatible with a democracy real and it will disappear as such. And the State which class organization, will go for the same road. The representative democracy was an indispensable link in the evolution toward the democracy direct, while the technical and cultural means didn't exist for the participation of the masses. This stage has happened. Today, the technological and economic conditions allow to the towns to recover the real power of their sovereignty, usurped during two hundred years by the oligarchies.

3.3. the rational-ethical-aesthetic man

To transform the society there are three possible roads: a) to manipulate the being genetically human; b) to try to create the "new man" and, c) to change the institutions that guide their performance. The parenthesis "to" it is the dream of the totalitarian capitalism, I eat it already proclaims openly it in the countries of the First World. The option "b" it has been applied by all the religions of the world, secular and metaphysicians, with disastrous results. The elects and illuminated, the talibanes, saints and political commissaries, guided by their respective credos, they have only produced hells for those other. For that reason, the New Historical Project opts for the change of the institutions, but not in one utopian perspective, but inside their objective possibilities.

The new world doesn't have for condition that its creators are sacred neither heroes, but humans, that inside the contradictory human condition of misery and splendor they are willing to change ethically their destination. Of course that the

fight experience will produce its own heroes, martyrs and flags; but it is not the same thing, to establish a precondition that to affirm the result of a process.

It doesn't fit doubt that the end of the selfishness, of the greed and of the exploitation that you/they are inherent to the one equivalence principle, will lead to changes so deep in the way of to think and to act that after their general installation, it will be possible to speak, in general terms, of a new being human. Because the rescued subject of the denigración of the bourgeois institutions, he/she will find in the real democracy an environment to develop in fullness their rational capacities (science), moral (ethics) and aesthetic (art). Overcome the division between the intellectual work and manual; abolished the yoke extenuante and brutalizador of the appreciation; conquered the discrimination of colors, sex and I enter and franked the abyss between field and city, the human being will be carried out in the three sources of our being: the work, the eros and the knowledge.

CHAPTER 4

Transition to the new socialism

4.1. The global system of dominance

The humanity has fallen in hands of an elite delincuencia, composed by about ten thousand bankers, industrial and professional politicians that use the resources of the planet and the fruits of our work, for yes. They monopolize the benefits of the energy, of the technology, of the science, of the foods, of the education and of the health, leaving to the majorities in the misery and the abandonment. In this way, the human being's three virtues: 1. the critical-rational thought; 2. its aesthetic capacity (artistic) and, 3. their ethical potential (moral), they cannot be developed, that that it constitutes a violation of their more elementary human rights. To return him the right of to live and to evolve worthily, the humanity has to recover to the global society and to make it his. The only means that we have to achieve this objective is the Participative Democracy (DP).

In the previous chapters we have explained the three basic institutions that conform the one I half-close social in that the citizen of the society will grow without classes. That is to say, we have defined the one strategic horizon of our transformation fight. What he/she lacks to make is the determination of some characteristics of the transformation program that it will drive us of our reality current until the new society, without getting lost in the road. For that it is necessary to remember some basic facts.

All human being and all human community have to solve four necessities to be able to exist: 1. The necessity to eat; of there the economy is born, with its relationships and institutions. The economy is, therefore, the social relationship, by means of which the nature transforms in goods and services to satisfy the human being's material necessities.

2. The necessity to understand each other with the other ones to be able to live and to act in community; of there he/she is born the culture, with their relationships and institutions that integrate all the citizens in the society, by means of languages, values, traditions, etc., shared.

3. The necessity to take and to execute decisions on behalf of the collective (community); of there the politics is born, with its relationships and institutions, being the main one the State.

4. The necessity to defend physically before aggressions and impositions; of there he/she is born, with their relate and institutions, the military thing.

The quality of people's life and of the communities it depends of how they are organized those relate and the human being's basic institutions. If they are organized with the democratic participation of all, they will be beneficial for all.

On the other hand, if one leaves the organization of those relationships and institutions in hands of those small sets of rich and powerful, these they take advantage of them in their own benefit and without consideration for the other ones.

This is, in fact, the situation that reigns today in the global society of the democracy representative and that he/she explains why around the humanity's 80 percent it subsists with scarce or null quality of life, while 20 percent (the First World), he/she concentrates the 83 for hundred of the wealth of the planet and they have revenues per layer from 25 to 30 thousand annual dollars. The question that is born of this situation, is the following one: How it achieves a world minority of ten thousand bankers, industrial and commercial capitalists and their professional politicians, to exclude to the majority of 5.5 thousand millions of human beings of the benefits of the work, of the education and of the current technology

Said otherwise: Why the overwhelming majority of the human beings tolerates the tyranny of that small global oligarchy The answer is that the elite has built a dominance system, exploitation and alienation that it embraces the human being's four basic relationships and that he/she goes from the two centers of power world, the United States and the European Union, until the towns and more secret neighborhoods of Latin America, Africa and Asia.

This system has four characteristics that are important for the design of the program of transition:

1. it is vertical and antidemocrat, that is to say, he/she goes from above down;
2. the elite that dominates him is the Atlantic bourgeoisie, that is to say, the elites of United States and the European Union;
3. it uses the four relate social basic to dominate and to explode. In form graph, this system can to be presented in the following way:

System global fig. 1.

4. The last characteristic of the system consists on its capacity to maintain its unit, efficiency (operability) and directionality - in spite of the countless activities and daily operations, that they carry out 6.5 thousand million human beings in the four social relationships and in an enormous one diversity of cultures and levels of technological development in the whole planet - through three main institutions:

1. the national economy of market;
2. the formal democracy;
3. the classist State.

Those three institutions of the system (their institutional structure) they are untouchable, because they are their support. They are the support (their pillars) that it maintains the bourgeois order, because it unifies to all the operations of the society, what guarantees their stability and daily reproduction.

They are as a focus that concentrates the multiple ones "you color" (the spectrum) of the light in a single light white or as the center of gravity in the physics, around which you/they rotate all the events.

The operation and the protection of the three institutions - the national economy of market, the formal democracy and the classist State, they are the essence of the Historical Project of the capital - because they provide him their economic wealth and their dominance power. Integrating those three institutions to the previous graph obtains the following illustration of the one system:

. System global fig. 2

4.2. The system of global emancipation

To reform to the bourgeois society, it means, for that said previously, to reform or to modify those institutions. To transform qualitatively to the bourgeois society (to revolutionize it), it means to replace those institutions of exploitation, dominance and exploitation for the institutions of the real democracy.

The transition program that is the means to arrive to such an end is derived of two elements: a) of the current capitalist reality and b) of the institutional structure of the Participative Democracy. This it programs he/she should have, therefore, the following elements:

1. It should present alternative transformadoras to each one of the four relationships of exploitation, dominance and alienation of the system;
2. It should integrate those alternatives (or "contrarelaciones") through the basic institutions of the Participative Democracy;
3. The form final of the program and the construction of the movement is made from below up;
4. The dimension of the program and of the movement (the nets) they go of the neighborhood until the global dimension, it is to say, the program is, at the same time, national, regional and global;
5. It is not the old outline of the revolution in stages - first the democratic one and later the socialist - but of a proposal integrated of the factors a) and b), mentioned previously;
6. Neither it is the search of the mythical national bourgeoisie or of any other subject of predetermined liberation, but of the one recognition that those subject of liberation will be multclasistas, pluriétnicos and of both goods.

The graphic expression of those characteristics of the transition program is in the one following outline. System global fig. 3.

4.3. The transforming subject

The problem of the realization of the New Historical Project is the task that Martin thought about Lutero before the Catholic Church: How to change a totalitarian, corrupt and repressive global system. The answer, obviously, is not in strategies of "negation" to the capital. Tactical negatives can make sense in particular operations (for example, the boycott of consumers to companies), but they don't constitute a strategy of world transformation. Neither they seem to exist the conditions for the armed revolution in the traditional sense, mainly in the centers of the system where it is concentrated the global power. The International formation of a new one Worker would constitute, in turn, more than an answer, an organizational-abstract desire in front of a concrete sociopolitical problem. A form cannot be created (organization) while there is not a content; the formal principle cannot exist without the material principle that (dialécticamente) it is its reason of being and he/she gives him life. With the result that the programmatic one is first; later - on a critical mass of participation - local, regional and global nets of communication will be constituted (electronic) and I support.

Then, when can it become the theory force material of change Marx has given the answer: when it roots in the masses. This defines the historical moment of the global fight. Among the one verb and the sword, the moment is, predominantly, of the verb.

The forces democratizadoras are in a situation similar to that of the feudalism French before 1789, when the economic and political elites resisted to the democratization and to the efforts to create a fairer society. In the same documents of the Program for the one I develop (UNDP), elaborated by the United Nations, it is recognized that the knowledge scientific, the technology and the capital exist to liberate to the world of the hunger in "less than one generation"; but what it lacks, diagnoses the institution, it is the "political will." This is the great obstacle that has to overcome the new subject of real democratization, legitimated so much in their historical project by the fact of being the world population's majority as for the contents of their program. This subject emancipador is conformed by the community of victims of the neoliberal capitalism and of all those that are solidary with her. The labor class it will continue being a fundamental posse inside this community of victims, but it won't probably constitute their force hegemónica. The community of victims is multicultural, pluriétnica, policlasista, of both goods and global, and it embraces to all those that coincide in the necessity to thoroughly democratize the economy, the politics, the culture and the coercion systems physics of the world society.

As always in the history, the vanguard of a new historical project is constituted to inclination of their fight practice and the theoretical quality of their project; not for autonombramiento neither for an act of derived faith of their structural position in the social system, neither like I hold "metaphysician" that it acts on behalf of the history, of God, of the sex, etc.. It has been this way the process of the aristocracy, of the small and great bourgeoisie and of the European proletariat, when they became vanguards, and everything indicates that this won't be different in the global society. In fact, the organic constitution of those subject of change cannot be operated in another way in the practice; those subject s potentially democratizadores of the global society - precarious sectors, the natives, the women, the critical intellectuals, the progressive Christian, the independent ONGs, etc. - they won't accept them to be imposed the leadership of a sociopolitical entity whose genuineness be not derived of their practice libertadora.

This subject emancipador faces the subject world elitist-reactionary, conformed for four main structures of power:

1. The transnational capital and their means of realization economic, the world market;
2. the great national capital, associated of dependent way to the one transnational;
3. the States national capitalists that you/they constitute the means of realization political-military of the great capital and, 4. the global protoestado and the regional protoestados. The realization of the NPH will be given in three stages:
 - a) the final phase is the society without economy of market, without State and without excluding culture; of this strategic horizon they are derived those contents, objectives and forms of fight of second o'clock and first stage;
 - b) the intermediate phase will be a time of coexistence of inherited elements of the bourgeois global society and of elements of the new society global posburguesa that will be good for the gradual harmonization among the levels of I develop technological, educational, economic, political, cultural, military, etc., of the States of the one First World and of the States neocoloniales; because it is obvious that the abysmal disparities in these sectors that it has produced the capitalism during

the last two hundred years, won't allow the peaceful and democratic coexistence inside the global society. The function of this phase consists in the gradual and deliberate evolution of the objective and subjective structures that you/they will make obsolete those you structure and patterns of operating, repressive behaviors and enajenantes that are characteristic of all the societies of class of the past.

The first phase ("c") of superación of the global capitalism it is the time that we are living; this phase began, in the political thing, with the rebirth of the critical thought in the years ninety and it is characterized at the moment by the process of constitution of the programmatic one of the society posburguesa. The dynamics of the fight democratizadora in this stage is determined by the relationship among three factors (variables): the structures and class consciences; the strategic objectives of the one NPH and the correlation of forces among the main contemporary sociopolitical actors. The objective of this first phase of the transition program consists on reaching the concientización of the majorities in such a depth and width that the correlation of forces to world scale leans in favor of the sectors democratizantes; allowing, in this way, the growing neutralization of the capitalist system and of their elites like decisive of the logic of development of the society global.

The program of change toward the society poscapitalista will have to mediatize the objectives strategic of the NPH with the existent relationships of power, so that the demands immediate of the programmatic one and of the daily fight they reflect the objectives of the future, while these leave of being postulated abstract to acquire fight potential in the daily reality. The future becomes force of the present and the present becomes step toward the future; realism and utopia they generate the programmatic one and practice emancipadora.

Inside this context elements important democratizadores of the New one can be identified Historical project that you/they should already think about for the dispute of the first transition phase toward the new society. Regarding the democratization of the economy, for example, it is necessary to fight for the control of the majorities about the most significant macroeconomic decisions in the production, distribution and redistribution of the product and social plusproducto. The investment is the strategic variable of any system economic capitalist, not only regarding the power political-social that grants, but also as for the level of life and social security of those majorities. Therefore, the areas of high-priority investment and the respective proportion of the GDP, dedicated to them, they must opt for referendo, as much in the private sectors as in those state of the national economy. The same thing is valid for the national budget that should to be ratified every year by plebiscite, after their public debate. The same logic should be applied to the federal and municipal levels of States, as, in fact, it is already made in more than a hundred Brazilian municipalities under the control of the Party of the Workers. The operative technology for these exercises of Participative Democracy don't present bigger problems: he/she is solved with the one Internet. It is placed in each apple a computer and the citizens that don't have one own, they go to "to vote" in that of collective use. In the presidential elections in Brazil in 1998 already you it used this system of "electronic urn."

Also, the desconcentración of the social wealth in the field, the industry, the trade and those finances - that today they are the material support of the dominant plutocratic power of the elites and of those States - it constitutes an objective necessity in the road toward the new democracy, so much stops to improve the

economic growth, like to foment the social justice and to reduce the crime rate. The same thing is valid for the cancellation of the foreign debt; the balance in the terms of I exchange; the end of the protectionism of the dominant countries and the compensation of the Third World for the secular spoliation of the colonialism. As for the last thing, the one should be applied principle of the victims' of the Jewish holocaust material rehabilitation in Germany, to the victims of the esclavismo, of the forced work, etc., either through the principle proposed by Arno Peters, already be by means of a commission of the UN that calculates the respective values and fix the sums and modalities of the compensation.

The breakup of the NATO like armed arm of the powers neocoloniales; the abolition of the one feudal Council of Security of the UN - that doesn't recognize the principle of the division of powers, because it accumulates in yes the legislative, juridical powers and the world government's executives, without legitimation neither democratic control some, because he/she not even undergoes the jurisdiction of the one International tribunal of Justice of The Hague - ; the democratic voting of the General Assembly of the UN on all legislation and regulation that it concerns to the international society, at the beginning, probably, by means of pondered votes and, later on, according to the formal principle of: a State, a vote; the redistribution of the world entrance that at the moment is monopolized, in a 83 for hundred, in hands of the global population's 20 percent; the democratization of the culture, by means of the equal access of the main sectors of the civil society to the means of communication; for example, the distribution of the television channels among the more sectors important of the society, as workers, employees, managers, women, indigenous, students, etc.; the formation of a world bottom of scholarships for scientific and artists of the Third World, in order to counteract the "flight of brains" - induced so much by structural differences as for deliberate politicians - toward the First World; the return of the cultural patrimony of the one Third World, condemned by the colonialism, to their legitimate owners; the appropriate remuneration of the work of the woman's home; a worthy basic entrance for all the members of the society, including people disabled to work; the constitutional obligation of a referendo to decide the beginning or the end of a war - ability usurped nowadays by the elites - ; the reorganization of the centralist State and oppressor of ethnic minorities by means of their federalización and the one I respect to the autonomy of the towns that you/they cohabit to their interior; the active promotion of those sectors that for ethnic, sexist or historical discrimination (women, ethnic minorities, etc.) you they find subrepresentados in the public life (I converse, government, etc.) and private (companies); in short, a series of contents and objectives of the New Historical Project that he/she can exists and it should to already be integrated in the national, regional and global programs of fight of the first phase of its realization.

Some of these programmatic elements could seem utopian in the sense of representing good desires, before social demands whose times of realization have arrived. Without I levy, this is not this way. Let us take, for example, the case of the compensation to the victims of the one colonialism. The monetary compensation that he/she paid the German State for the murder of great part of the Jewish population during the holocaust, it established the juridical precedent of the responsibility material of the State, for crimes against the humanity executed under their jurisdiction. This incipient artificial norm is enlarging to cover other serious

violations to the rights human. The American government had to reimburse his citizens recently of Japanese descendant, wrongly detained in concentration fields during the Segunda Guerra World cup.

The growing international artificial code of this type of violations of the rights human - from the casuistry toward the universal legislative norm - that observe in the case of the one holocaust, reveals three important facets of the problem in discussion:

a) The constant advances of the one international right and of their corresponding institutions, as the installation of a court international criminal (Criminal International Court);

b) the artificial possibility and politics of to subject the horrendous crimes of the European colonialism from the beginning of the global society (XV century) to the sentence of international tribunals of justice and of obtaining a compensation material adapted by the pro-slavery exploitation, the forced work and the genocides;

c) that the implementation of this, as of the other demands of the New Historical Project, it is one question of power. The justice of those demands is not in doubt, but its realization requires - as in the case of the holocaust - the accumulation of enough forces to repair (quantitatively) the injustices of the past and to impede those of the present and future.

As for the space dimension of the project it is evident that their action field has that to integrate the world, regional and national dimensions of the global society organically contemporary. No project of deep national change can prosper at the present time, if it is not conceptualized and it executes like integral part of the world project; because those dependences of the national economies in front of their environment are so deep that the survival of a project no-capitalist inside the own national space becomes impossible to medium term. In this sense, the old theoretical discussion about the possibility of building the one socialism in a country has only been solved by the historical evolution of the last decades. The capitalism is a systemic problem, not local - as the cancer - ; for ende, it can only be conquered with a defense strategy and systemic superación. For the same thing, the practice democratizadora of the world subject of change will only be able to accumulate the force to overcome the one current system, if it conceptualizes the fight at global and regional level, to act at national level and local. (Global Think, local act).

This doesn't mean that the transformation has to be made simultaneously in the whole village global, so that it is viable. If we analyze the respective evolutionary processes - as the one Protestantism, the capitalism or the socialism - we reach the conclusion that the changes qualitative in the social systems they are operated inside an unit of the biggest system: the reformation Protestant in the world Catholic Church; the revolution of 1789 in the national State of a system regional (central Europe); that of 1917 in a national State of the global capitalist system and the one of 1979 (Nicaragua) inside a regional system of being able to (western hemisphere). In fact, the situation of the New Historical Project in this sense is similar to that of the French Revolution and also to that of the Socialist Revolution. The first one only triumphed in a country and it was victim of the intervention of the feudal States. However, it conquered in front of the feudal counterrevolution and some decades later (1830), the refeudalización danger had stopped to be

real. The Soviet revolution went by the same incidents. To the victory of 1917 it followed the intervention and the one I block capitalist. Defeated the counterrevolution in 1925, broken the blockade in the years thirty, the one socialist system expanded halfway the humanity, before succumbing in the years ninety. In other words, the new system settles down in general, in a sector of the system dominant he/she stops then to expand gradually and to become of subsystem or new order (heterodoxy) in system or main order (normal): the new orthodoxy. We suppose that the transition of the contemporary global capitalism toward the democracy world participativa will continue this same evolutionary logic.

The same as the French Revolution and the Soviet, the new system will have to be imposed at two big challenges:

- a) An environment, probably hostile in front of the new democratic order and,
- b) to be sustained and to still grow inside the interaction with the world market capitalist and with those sectors of the national or regional economy that the are not still sufficiently developed for to convert them to the new system.

The economy of the transition phase will have, for ende, necessarily a mixed character. The base of operation of the most advanced sectors in the new national economy it will pass of price-costs monetary to values objectives (time of work), while the latest sectors and the one market World cup will continue operating on price-costs.

Two factors will make possible the temporary coexistence of the two types of economy:

- a) The base for the calculation in monetary units (price-cost) in the market economies it is, in fact, the one calculation in units of time: from the beginning of the Taylorismo, in the years 30, until the more ones modern methods of quantification of times of production in the industrial engineering contemporary;
- b) the convertibility of both mensuration scales, demonstrated by Stahmer that it returns possible the exchange among the two types of economy. When being developed the economy of equivalent, the tendency toward the gradual expansion of the areas lowers control of the objective value it will reduce the weight of the market economy, until this finally will stop to exist.

Finally, it is not valid the argument that nowadays the television returns impossible the concientización of the masses. The "television" of the feudalism it was the Catholic Church that guaranteed the adoctrinación and the population's systematic submission. But in spite of their strong control by means of the one psychological terrorism and of State (the inquisition), it could not impede the re-birth of the reason secular and critic that you/they broke the invisible chains of the ideology.

4.4. the value of work

The necessity to determine the objective value of the products, just as it specified the economy classic, it is *conditio sine qua non* of the socialism whose fundamental postulates are: a) the justice social and, b) the democracy real participativa. In the market economy the price of the merchandise it is, essentially, the result of the power of the economic agents. That that has more power, already be political, economic, cultural or military, it imposes the price to the weakest and this is valid for those prices of the products, services and of the work force.

The bourgeois economy mystifies this fundamental fact by means of three ideologismos:

1. the "law of offer and it demands",
2. the theory of the marginal costs and,
3. the theory of the subjective value.

The constituent fact of the bourgeois economy, that the precios/ganancias is a function of the one to be able to, it demonstrates that the whole civilization of the capital, from the political thing, the cultural thing, the military thing and until the economic thing is organized of antidemocrat way and antisocial.

The only way to achieve a fair economy (socialist) it is by means of the exchange of same labor efforts (equivalent), understanding each other for value the quantity of time average necessary for the production of the product.

The determination of the objective value is a methodological-scientific problem; the implementation of the exchange of same values (equivalent), it is a problem of power. The first thing is solved with the advanced mathematics and the computer science; him second with the Participative Democracy. Contrary to the subjective character of the concepts price and value that it uses the economy bourgeois, the concept of the value like incorporate abstract work to a product or service (the one time spent in their elaboration), it is an objective magnitude. It is in fact this objective character that it allows him to be the base of a fair economy, because the exchange you can base on values of same magnitude, independently in the concrete way that you/they have the products or services. The status of the value like objective magnitude - that is to say, independent of any subject matter - it distinguishes it for example of the values that are merely intersubjetivos, the value of a monetary note. Such a problem requires of a brief reflection starting from the concept time. At first sight, the time seems to be an unit of mensuration intersubjetiva, similar to the denomination of a bank note. It confers the impression that a human community defined the units of the time and when being accepted such a definition like useful, this system extended around of the globe: he/she became intersubjetivo or independent of the points of view of a particular subject . Until here it arrives, in fact, the status of an unit of monetary mensuration, as a note bank.

In the case of the definition of the value for the abstract work, the status epistemológico of the one concept passes from the level intersubjetivo to the objective, because the time is the expression of certain movement regularities inside the nature; for example, a day similar to 24 hours he/she refers to a complete turn of the earth around their rotation axis. This means that the time expressed by means of certain mensuration units (days, hours, etc.) - that can vary - one objective relationship inside a distance, traveled by means of a certain speed. Those you distance they are objective and the displacements also; their mensuration system is only intersubjetivo, because it consists on pragmatic conventions, agreed by a community human, like it happened, for example, with the thermometer, the seismograph and the kept original meter in Paris. In this the qualitative difference resides among the objective parameter of the value for time and the one subjective-arbitrary of the bourgeois economy.

This reflection demonstrates that the value of the work, defined as quantitative unit of time, it is logically superior to that of the price, because it achieves a bigger correspondence with the reality objective that the price, and, therefore it means

an important methodological-theoretical advance. Recently, Arno Peters has advanced the conceptual-mathematical problem significantly of the mensuration of the value. Leaving behind years of experimentation with the wombs of Leontief (input-output), the scientist was able to develop in January of 2002 a womb that allows to calculate the one value of any product. This paradigm, denominated "Rosa of Peters" (Petersche Rose), it will be, probably, the base of all the calculations of value of the economy of equivalences. At the moment, the new paradigm is being subjected on approval with data of diverse goods to demonstrate their utility empirically.

The womb of Arno Peters (Rosa of Peters) it is a much more didactic form of presenting the one theoretical problem of the calculation of the objective value that the wombs of Wassily Leontief (see you following outlines), although it drives to the same form mathematics that these. That didactic effect and heuristic it is achieved by the following thing.

1.1 the organization of the inputs (variables) that determine the final value of the product, in a round model, allows to understand at once that the chain of inputs is virtually infinite. Of this recognition is derived important methodological inferences.

1.2 the womb reduces that infinity of variables at two, in consonance with the classic economy and their postulate, that only the work - in their alive or incorporate form - it generates value.

1.3 the womb reveals that the grade of precision with which you can determine each input of particular time, depends that if it is the alive or incorporate work. The times (you value) of the alive work - represented in the superior half of the womb - they can be calculated with one precision of virtually a hundred percent, because all the processes of production of the modern economy is based on the vector "time."

The calculation of the values of the incorporate work (machines, tools, physical spaces, etc.) it is more complex and it requires approaches to the real value transferred to each product, to likeness of the process of calculation of the depreciation charts at the moment in use.

1.4 in the first stage of the NPH (today) the mensuration process, operacionalización and instrumentalización of the objective value would be, therefore, a combination of precise mensurations and reasoned estimates, no-arbitrary.

This problem, however, is of smaller importance for three reasons: a) in the goods durable, the precise value of the alive work of a phase t_0 becomes precise value of the work incorporated in the phase t_1 and therefore, the "area of approaches" in the calculation of values you it reduces successively; b) compared with the prices of the bourgeois, certain economy antidemocratically for the superiority of power, the partially precise value and partially approximate of the transition phase toward the equivalence economy, it constitutes a jump qualitative in the advance toward a more fair, democratic economy and ethics; c) in general, the one approach grade of a mathematical calculation to the true parameters (objectives) of a empiric phenomenon, is a pragmatic decision. The levels of trust, of precision, etc., necessary for the practical use of the knowledge of a phenomenon, they are a function of the purpose that he/she has that knowledge.

1.5. In abstract, it is possible to calculate the value in an inductive or deductive way. But, probably the induction that adds the relative value of each input to

arrive to the definitive value of the final product, it can be less functional than the deduction; for example, the calculation of the value of the production of one day, month or year of a product, continued by the disintegration of that value compound in unitary values of the products.

1.6 with the Rosa of Peters, he/she closes a structural-institutional lagoon of the theory of the society post-capitalist, because the institutional structure of the new economy is defined by three sub-institutions or subsystems: 1. the democratic planning that is the execution of the sovereignty of the citizens in the field of the economy, right denied by the formal democracy of the bourgeoisie that only allows a political incidence (marginal) of the citizen; 2. the calculation of the value objective of the products and services by means of the Rosa of Peters and the wombs of Leontief and, 3. the one I exchange exactly of products and services it conforms at the beginning of their equivalences.

4.5. complex work

The principles of the objective value, of the equivalence and of the democratic planning they are undoubtedly the fundamental axes of the fair economy of the future. They are formulated by Arno Peters in their classic form or maximum development, like they will exist in the democracy final participativa. But everything indicates that for the transition phase, those principles will have to be adapted to those condition of the environment that you/they will be given in the process of superación of the market economy. Taking like base the principle of rigorous equivalence or absolute equality of Peters, they will have that to be introduced, very probably, in the mixed economy of transition, modifications that take into account realities of the human condition inside the capitalism: the importance of those material stimuli, the desire of power, the envies, tendencies toward the corruption, the narcissism, the one authoritarianism and the consumerism, among others.

One of the most important, but also more complex aspects, of this problem is the relationship between the worker's productivity and their material retribution, that is to say: When one bigger individual productivity of the worker TO in front of the hard-working B - with the same quantity of worked hours - does it allow him to receive bigger bonus that B To solve this problem he/she will be necessary to differ among, at least, two types of situations or variables that allow or they deny a bigger retribution in the event of more productivity. When the biggest productivity of the one worker TO it is a personal merit when their interest, preparation, care, disciplines, will, etc., they are the source of their biggest productivity - he/she should receive an additional bonus to the value base that he/she obtains for the day. If he/she has worked 40 hours, he/she would be gratified, for example, 44 hours. On the other hand, when the biggest productivity of TO it is of variables that don't constitute merits own or personal - the age (it is younger) it has better production technology, it belongs to a privileged ethnic group (ethnic favoritism) or a privileged sex (favoritism sexist) - , he/she would not be justified a bigger retribution that the basic one; of making it, it would be punishing to a grown-up for their smaller productivity, even when it is outside of their reach to remedy the it causes of this punishment.

An additional reflection on this problem should include the work conditions - hardness or bigger risk of danger - : a cane cutter or a miner should receive certain

bonuses extras - more vacations, etc. - in front of somebody that carries out a simple work in an office with air conditioning. The argument of Peters, that the calculation of such retributions - for above of the objective value - it is necessarily subjective, it is undoubtedly correct; because there is not way to demonstrate, for example that a civil engineer should win twice more than a mechanic instead of 1.8 or 2.2 times. However, it would be not very realistic, to try to jump of the homo capitalist oeconomicus without mediation toward the ethical man of the democracy of the future. In the work of the classics, in Marx, for example, this problem is treated in the concepts of simple work and complex work, what we find a correct boarding.

The second modification refers to the concept of half productivity. Inside the economy of market, the economic subject whose productivity is below the national stocking or world, it spreads to be eliminated, mainly in time of crisis. He/she means that the costs of production provides a realistic guide regarding the levels of productivity reached in each moment and place in the global economy. For the economy democratically planned you it requires a similar standard - a stocking of productivity - that allows to evaluate the acting of each economic unit - mainly the companies - with certain objectivity, for not wearing away scarce resources. That productivity averages it will substitute to what Marx called the law of the value of the capitalist economy. The rose of Peters in Spanish Die Peters Rose